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 USPTO MANUAL OF CLASSIFICATIONS THESAURUS ISSUE DATE: Jun 2009

HCAplus now includes complete International Patent Classification (IPC) reclassification data for the third quarter of 2009.

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L80 ANSWER 1 OF 23 HCAPLUS COPYRIGHT 2009 ACS on STN
 AN 2004:681491 HCAPLUS Full-text
 DN 141:194942
 TI Preparation of polyamino and/or polyammonium-polysiloxane copolymers and use in hair preparations
 IN Lange, Horst; Wagner, Roland; Kropfgans, Martin; Musiol, Sabine
 PA GE Bayer Silicones GmbH & Co. KG, Germany
 SO PCT Int. Appl., 116 pp.
 CODEN: PIXXD2
 DT Patent
 LA German
 FAN.CNT 1

| | PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|----|---------------|---|----------|-----------------|--------------|
| PI | WO 2004069137 | A2 | 20040819 | WO 2004-EP50091 | 20040206 <-- |
| | WO 2004069137 | A3 | 20041021 | | |
| | W: | AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, | | | |

LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO
 RW: BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE,
 BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU,
 MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN,
 GQ, GW, ML, MR, NE, SN, TD, TG

DE 10304923 A1 20040826 DE 2003-10304923 20030207 <--

PRAI DE 2003-10304923 A 20030207 <--

DE 2003-10333375 A 20030723 <--

AB The invention relates to the use of linear or cross-linked polyamino and/or polyammonium-polysiloxane copolymers comprising repeater units of formula: -[Q-V]- in the production and/or treatment of dyed hair in addition to compns. for the production and/or treatment of dyed hair. The copolymers are used before, during or after hair dyeing; also hair gels, styling products, and sprays are prepared. Thus PAR1 was prepared from N,N, N',N'-tetramethyl-1,6-hexane diamine and Jeffamin ED 600 and stored as an aqueous emulsion. A 43.5% of the prepared silicone-containing composition was used in a hair shampoo as a 4.6 weight/weight% component; other ingredients were (weight/weight%): ammonium lauryl sulfate (26%) 24; ammonium laureth sulfate (28%) 14.3; cocoamidopropyl betaine (35%) 11.43; polyquaternium-10 0.5; water 54.17.

IC ICM A61K

CC 62-3 (Essential Oils and Cosmetics)

Section cross-reference(s): 38

IT 608530-63-8P 609340-85-4P 740815-32-1P 740839-04-7P

RL: COS (Cosmetic use); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation); USES (Uses)

(preparation of polyamino and/or polyammonium-polysiloxane copolymers and use in hair preps.)

IT 740815-32-1P

RL: COS (Cosmetic use); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation); USES (Uses)

(preparation of polyamino and/or polyammonium-polysiloxane copolymers and use in hair preps.)

RN 740815-32-1 HCAPLUS

CN Acetic acid, chloro-, oxydi-2,1-ethanediyl ester, polymer with α -[dimethyl[3-(oxiranylethoxy)propyl]silyl]- ω -[[dimethyl[3-(oxiranylethoxy)propyl]silyl]oxy]poly[oxy(dimethylsilylene)] and N,N,N',N'-tetramethyl-1,6-hexanediamine, dodecanoate (salt) (9CI) (CA INDEX NAME)

CM 1

CRN 143-07-7

CMF C12 H24 O2

HO₂C—(CH₂)₁₀—Me

CM 2

CRN 398133-61-4

CMF (C10 H24 N2 . C8 H12 C12 O5 . (C2 H6 O Si)_n C16 H34 O5 Si2)_x

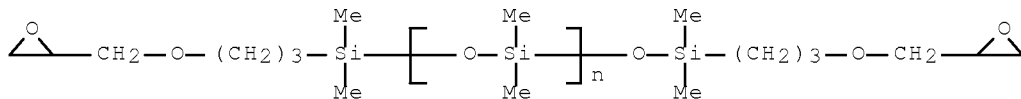
CCI PMS

CM 3

CRN 130167-23-6

CMF (C2 H6 O Si)_n C16 H34 O5 Si2

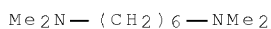
CCI PMS



CM 4

CRN 111-18-2

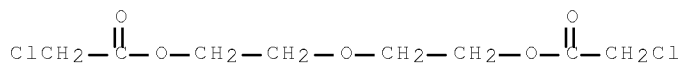
CMF C10 H24 N2



CM 5

CRN 106-78-5

CMF C8 H12 Cl2 O5



OSC.G 2 THERE ARE 2 CAPLUS RECORDS THAT CITE THIS RECORD (2 CITINGS)
 RE.CNT 14 THERE ARE 14 CITED REFERENCES AVAILABLE FOR THIS RECORD
 ALL CITATIONS AVAILABLE IN THE RE FORMAT

L80 ANSWER 2 OF 23 HCAPLUS COPYRIGHT 2009 ACS on STN

AN 2004:567310 HCAPLUS Full-text

DN 142:43373

TI Study on emulsification and conditioning properties of polyether
 -modified silicone contained quaternary ammonium and
 its application in shampoo

AU Cheng, Jianhua; Wang, Xiaojun; Hu, Yongyou; Zhou, Wei

CS College of Paper and Environment Engineering, South China University of
 Technology, Guangzhou, 510641, Peop. Rep. China

SO Xiangliao Xiangjing Huazhuangpin (2003), (6), 14-16

CODEN: XXHIA; ISSN: 1000-4475

PB Xiangliao Xiangjing Huazhuangpin Bianjibu

DT Journal

LA Chinese

AB The polyether-modified silicone contained quaternary ammonium was a new kind
 of cationic surfactant. The emulsification and the effect of hair dry and wet
 conditioning were measured. The result showed that the particle size of
 emulsion was about 10 μm ; the wet conditioning effect was improved by 28.0%,
 and the dry conditioning effect was improved by 21.2% when adding 2.0% of the
 title compound to the shampoo. Thus, the title compound was better than un-
 modified silicone emulsion.

CC 62-3 (Essential Oils and Cosmetics)

ST polyether silicone quaternary ammonium
emulsification conditioning shampoo

IT Shampoos
(conditioning; emulsification and conditioning properties of
polyether-modified silicone contained quaternary
ammonium and its application in shampoo)

IT Emulsification
Particle size
(emulsification and conditioning properties of polyether
-modified silicone contained quaternary ammonium
and its application in shampoo)

IT Quaternary ammonium compounds, biological studies
RL: COS (Cosmetic use); PEP (Physical, engineering or chemical process);
PYP (Physical process); BIOL (Biological study); PROC (Process); USES
(Uses)
(emulsification and conditioning properties of polyether
-modified silicone contained quaternary ammonium
and its application in shampoo)

IT Polysiloxanes, biological studies
RL: COS (Cosmetic use); PEP (Physical, engineering or chemical process);
PYP (Physical process); BIOL (Biological study); PROC (Process); USES
(Uses)
(polyether-; emulsification and conditioning properties of
polyether-modified silicone contained quaternary
ammonium and its application in shampoo)

IT Polyethers, biological studies
RL: COS (Cosmetic use); PEP (Physical, engineering or chemical process);
PYP (Physical process); BIOL (Biological study); PROC (Process); USES
(Uses)
(siloxane-; emulsification and conditioning properties of
polyether-modified silicone contained quaternary
ammonium and its application in shampoo)

L80 ANSWER 3 OF 23 HCAPLUS COPYRIGHT 2009 ACS on STN

AN 2004:453426 HCAPLUS Full-text

DN 141:25051

TI Preparation of quaternary ammonium derivative of
polysiloxanes and formulations therefrom for treatment of
substrate surfaces

IN Lange, Horst; Roos, Christopher; Wagner, Roland;
Kropfgans, Martin; Graydon, Andrew Russell; Hartshorn, Richard
Timothy; Boutique, Jean-Pol; Delplanque, Patrick Firmin August; Johnston,
James Pyott

PA GE Bayer Silicones GmbH & Co. Kg, Germany

SO PCT Int. Appl., 86 pp.

CODEN: PIXXD2

DT Patent

LA German

FAN.CNT 1

| | PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|----|---------------|--|----------|-----------------|--------------|
| PI | WO 2004046452 | A2 | 20040603 | WO 2003-EP50772 | 20031031 <-- |
| | WO 2004046452 | A3 | 20040701 | | |
| | W: | AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW | | | |
| | RW: | BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, | | | |

BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE,
 ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK,
 TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

| | | | | |
|---------------|----|----------|-----------------|--------------|
| CA 2504914 | A1 | 20040603 | CA 2003-2504914 | 20031031 <-- |
| AU 2003302035 | A1 | 20040615 | AU 2003-302035 | 20031031 <-- |
| EP 1560973 | A2 | 20050810 | EP 2003-811391 | 20031031 <-- |

R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,
 IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK

| | | | | |
|----------------|----|----------|------------------|--------------|
| BR 2003015997 | A | 20050920 | BR 2003-15997 | 20031031 <-- |
| CN 1735729 | A | 20060215 | CN 2003-80108247 | 20031031 <-- |
| JP 2006505716 | T | 20060216 | JP 2004-552711 | 20031031 <-- |
| MX 2005004750 | A | 20050802 | MX 2005-4750 | 20050503 <-- |
| US 20060163524 | A1 | 20060727 | US 2006-533746 | 20060320 <-- |

PRAI DE 2002-10251525 A 20021104 <--
 WO 2003-EP50772 W 20031031 <--

ASSIGNMENT HISTORY FOR US PATENT AVAILABLE IN LSUS DISPLAY FORMAT

AB The invention relates to surface treatment formulations containing at least one nitrogen-free polysiloxane compound, at least one polyamino polysiloxane and/or polyammonium polysiloxane compound, and/or at least one amino polysiloxane and/or ammonium polysiloxane compound, and an optional silicone-free cationic surfactant, a coacervate phase-forming agent, and carrier substances. The patent also relates to the preparation of polyamino polysiloxane and/or polyammonium polysiloxane compound for the formulations. Also disclosed are the inventive formulations and the use thereof for treating natural and synthetic fibrous materials, for cosmetic formulations and as softener. Thus, a title formulation comprising an ammonium polysiloxane prepared by the reaction of epoxysiloxane with N,N,N',N'-tetramethyl-1,6-hexanediamine, and Jeffamin ED600 in presence of dodecanolic acid was formulated with polydimethylsiloxane, an amino-polysiloxane of this invention and water for comparison with com. detergent.

IC ICM D06M0015-643
 ICS D06M0013-463; A61K0007-06; C11D0003-37; D21H0017-59; D21H0017-07; C08L0083-02

CC 40-9 (Textiles and Fibers)
 Section cross-reference(s): 37, 46

ST fiber treatment formulation ammonium compd polysiloxane deriv
 surfactant

IT Polyelectrolytes
 Surfactants
 (cationic; preparation of quaternary ammonium derivative of polysiloxanes and formulations therefrom for fiber surface treatment)

IT Aggregates
 (coacervates; preparation of quaternary ammonium derivative of polysiloxanes and formulations therefrom for fiber surface treatment)

IT Polysiloxanes, reactions
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (epoxy; in preparation of quaternary ammonium derivative of polysiloxanes and formulations therefrom for fiber surface treatment)

IT Resins
 RL: TEM (Technical or engineered material use); USES (Uses)
 (guaiacum, cationic; preparation of quaternary ammonium derivative of polysiloxanes and formulations therefrom for fiber surface treatment)

IT Epoxy resins, reactions
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (polysiloxane-; in preparation of quaternary ammonium derivative of polysiloxanes and formulations

- therefrom for fiber surface treatment)
- IT Cosmetics
(preparation of quaternary ammonium derivative of polysiloxanes and formulations therefrom for applications)
- IT Fabric softeners
Surface treatment
(preparation of quaternary ammonium derivative of polysiloxanes and formulations therefrom for fiber surface treatment)
- IT Polysiloxanes, uses
Quaternary ammonium compounds, uses
RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(preparation of quaternary ammonium derivative of polysiloxanes and formulations therefrom for fiber surface treatment)
- IT 31900-57-9DP, **Poly(dimethylsilanediol), derivative with tetracyclodimethylsiloxane, aminopropylmethyldiethoxysilane, aminopropyl dimethylethoxysilane, hexamethyldisiloxane**
RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(**assumed monomers**; preparation of quaternary ammonium derivative of polysiloxanes and formulations therefrom for fiber surface treatment)
- IT 79-04-9, Chloroacetic acid chloride 109-55-7, N,N-Dimethyl-1,3-propanediamine 112-35-6, Triethylene glycol monomethyl ether 112-67-4, Palmitoyl chloride
RL: RCT (Reactant); RACT (Reactant or reagent)
(in preparation of quaternary ammonium derivative of polysiloxanes and formulations therefrom for fiber surface treatment)
- IT 151190-60-2P
RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(preparation of quaternary ammonium derivative and formulations therefrom for fiber surface treatment)
- IT 107-46-0DP, Hexamethyldisiloxane, derivative with tetracyclodimethylsiloxane, poly(dimethylsilanediol), aminopropylmethyldiethoxysilane, aminopropyl dimethylethoxysilane 109-01-3DP, N-Methylpiperazine, reaction product with epoxysiloxane and triethylene glycol monomethyl ether chloroacetate 111-18-2DP, N,N,N',N'-Tetramethyl-1,6-hexanediamine, reaction product with epoxysiloxane, Jeffamin ED600, salt with dodecanoic acid 143-07-7DP, Dodecanoic acid, salt with reaction product of epoxysiloxane, N,N,N',N'-Tetramethyl-1,6-hexanediamine, and Jeffamin ED600 556-67-2DP, Cyclotetrasiloxane, octamethyl-, derivative with poly(dimethylsilanediol), aminopropylmethyldiethoxysilane, aminopropyl dimethylethoxysilane, hexamethyldisiloxane 3179-76-8DP, Aminopropylmethyldiethoxysilane, derivative with tetracyclodimethylsiloxane, poly(dimethylsilanediol), aminopropyl dimethylethoxysilane, hexamethyldisiloxane 9046-10-0DP, Jeffamin ED600, reaction product with epoxysiloxane, N,N,N',N'-Tetramethyl-1,6-hexanediamine, salt with dodecanoic acid 18306-79-1DP, derivative with tetracyclodimethylsiloxane, poly(dimethylsilanediol), aminopropylmethyldiethoxysilane, hexamethyldisiloxane 90948-78-0DP, reaction product with epoxysiloxane and N-methylpiperazine
RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)

(preparation of quaternary ammonium derivative of polysiloxanes and formulations therefrom for fiber surface treatment)

IT 9016-00-6, Polydimethylsiloxane

RL: TEM (Technical or engineered material use); USES (Uses)

(preparation of quaternary ammonium derivative of polysiloxanes and formulations therefrom for fiber surface treatment)

IT 31900-57-9DP, Poly(dimethylsilanediol), derivative with tetracyclodimethylsiloxane, aminopropylmethyldiethoxysilane, aminopropylmethylethoxysilane, hexamethyldisiloxane

RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)

(assumed monomers; preparation of quaternary ammonium derivative of polysiloxanes and formulations therefrom for fiber surface treatment)

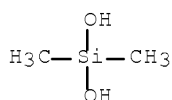
RN 31900-57-9 HCAPLUS

CN Silanediol, 1,1-dimethyl-, homopolymer (CA INDEX NAME)

CM 1

CRN 1066-42-8

CMF C2 H8 O2 Si



IT 109-55-7, N,N-Dimethyl-1,3-propanediamine

RL: RCT (Reactant); RACT (Reactant or reagent)

(in preparation of quaternary ammonium derivative of polysiloxanes and formulations therefrom for fiber surface treatment)

RN 109-55-7 HCAPLUS

CN 1,3-Propanediamine, N1,N1-dimethyl- (CA INDEX NAME)



IT 107-46-0DP, Hexamethyldisiloxane, derivative with tetracyclodimethylsiloxane, poly(dimethylsilanediol), aminopropylmethyldiethoxysilane, aminopropylmethylethoxysilane

109-01-3DP, N-Methylpiperazine, reaction product with epoxysiloxane and triethylene glycol monomethyl ether chloroacetate 111-18-2DP,

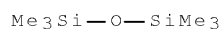
N,N,N',N'-Tetramethyl-1,6-hexanediamine, reaction product with epoxysiloxane, Jeffamin ED600, salt with dodecanoic acid

RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)

(preparation of quaternary ammonium derivative of polysiloxanes and formulations therefrom for fiber surface treatment)

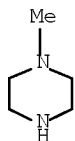
RN 107-46-0 HCAPLUS

CN Disiloxane, 1,1,1,3,3,3-hexamethyl- (CA INDEX NAME)



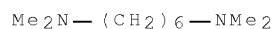
RN 109-01-3 HCAPLUS

CN Piperazine, 1-methyl- (CA INDEX NAME)



RN 111-18-2 HCAPLUS

CN 1,6-Hexanediamine, N1,N1,N6,N6-tetramethyl- (CA INDEX NAME)

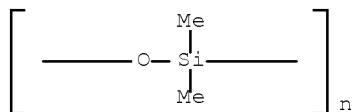


IT 9016-00-6, Polydimethylsiloxane

RL: TEM (Technical or engineered material use); USES (Uses)
(preparation of quaternary ammonium derivative of
polysiloxanes and formulations therefrom for fiber surface
treatment)

RN 9016-00-6 HCAPLUS

CN Poly[oxy(dimethylsilylene)] (CA INDEX NAME)



OSC.G 2 THERE ARE 2 CAPLUS RECORDS THAT CITE THIS RECORD (2 CITINGS)

RE.CNT 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L80 ANSWER 4 OF 23 HCAPLUS COPYRIGHT 2009 ACS on STN

AN 2004:413124 HCAPLUS Full-text

DN 140:408676

TI Linear polyamino and/or polyammonium polysiloxane copolymers.

IN Lange, Horst; Witossek, Anita; Wagner, Roland; Stachulla, Karl-Heinz;
Graydon, Andrew Russell; Hartshorn, Richard Timothy; Boutique, Jean-Pol;
Delplanque, Patrick Firmin August; Johnston, James Pyott; Sockel,
Karl-Heinz

PA GE Bayer Silicones GmbH & Co. KG, Germany

SO PCT Int. Appl., 61 pp.

CODEN: PIXXD2

DT Patent

LA German

FAN.CNT 1

| | PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|------|---|------|----------|------------------|--------------|
| PI | WO 2004042136 | A1 | 20040521 | WO 2003-EP50773 | 20031031 <-- |
| | W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW | | | | |
| | RW: BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG | | | | |
| | CA 2504981 | A1 | 20040521 | CA 2003-2504981 | 20031031 <-- |
| | AU 2003301831 | A1 | 20040607 | AU 2003-301831 | 20031031 <-- |
| | EP 1563136 | A1 | 20050817 | EP 2003-810454 | 20031031 <-- |
| | EP 1563136 | B1 | 20080514 | | |
| | R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK | | | | |
| | BR 2003015973 | A | 20050927 | BR 2003-15973 | 20031031 <-- |
| | CN 1735728 | A | 20060215 | CN 2003-80108232 | 20031031 <-- |
| | JP 2006505643 | T | 20060216 | JP 2004-549174 | 20031031 <-- |
| | AT 395458 | T | 20080515 | AT 2003-810454 | 20031031 <-- |
| | ES 2308036 | T3 | 20081201 | ES 2003-810454 | 20031031 <-- |
| | MX 2005004751 | A | 20050803 | MX 2005-4751 | 20050503 <-- |
| | US 20060235181 | A1 | 20061019 | US 2006-533837 | 20060320 <-- |
| | US 7563856 | B2 | 20090721 | | |
| PRAI | DE 2002-10251524 | A | 20021104 | <-- | |
| | WO 2003-EP50773 | W | 20031031 | <-- | |

ASSIGNMENT HISTORY FOR US PATENT AVAILABLE IN LSUS DISPLAY FORMAT

AB The title polymers, especially hydrophilic polyquaternary polysiloxane copolymer, having ether groups in the chain backbones and salt groups in the side chains or on the chain backbones are useful as washing-resistant laundry fabric softeners, and in detergents, drying composition for surface treatment and cosmetics. A quaternary ammonium siloxane was prepared by heating N,N,N',N'-tetramethylhexanediamine 19.38, acetic acid 12.14, a solution of ethylene glycol diglycidyl ether in ethylene glycol di-Me ether 35.26, di-Me polysiloxane diol diglycidyl ether 150, dodecanoic acid 2.5, and trimethylamine 0.33 g in aqueous iso-PrOH at 90° for 16 h.

IC ICM D06M0015-643

ICS C08G0077-388; C08G0077-452

CC 46-5 (Surface Active Agents and Detergents)

Section cross-reference(s): 62

IT 689295-66-7P 689295-68-9P 689295-70-3P

RL: COS (Cosmetic use); IMF (Industrial manufacture); TEM (Technical or engineered material use); BIOL (Biological study); PREP (Preparation); USES (Uses)

(linear polyamino and/or polyammonium polysiloxane copolymers useful as fabric softeners and in detergents, drying compns. for surface treatment and cosmetics.)

IT 689295-66-7P 689295-70-3P

RL: COS (Cosmetic use); IMF (Industrial manufacture); TEM (Technical or engineered material use); BIOL (Biological study); PREP (Preparation); USES (Uses)

(linear polyamino and/or polyammonium polysiloxane copolymers useful as fabric softeners and in detergents, drying compns. for surface treatment and cosmetics.)

RN 689295-66-7 HCAPLUS

CN 1,6-Hexanediamine, N,N,N',N'-tetramethyl-, polymer with
 α -[dimethyl[3-(oxiranylmethoxy)propyl]silyl]- ω -[[dimethyl[3-(oxiranylmethoxy)propyl]silyl]oxy]poly[oxy(dimethylsilylene)] and
 2,2'-[1,2-ethanediylbis(oxymethylene)]bis[oxirane], acetate (salt)
 dodecanoate (salt), compd. with N,N-dimethylmethanamine (9CI) (CA INDEX
 NAME)

CM 1

CRN 143-07-7

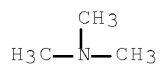
CMF C12 H24 O2



CM 2

CRN 75-50-3

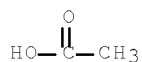
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CM 3

CRN 64-19-7

CMF C2 H4 O2



CM 4

CRN 689295-65-6

CMF (C10 H24 N2 . C8 H14 O4 . (C2 H6 O Si)n C16 H34 O5 Si2)x

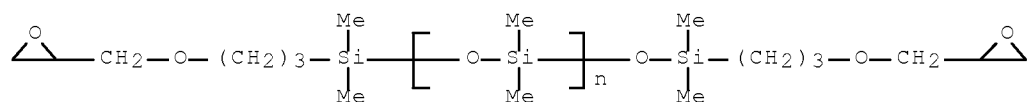
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CM 5

CRN 130167-23-6

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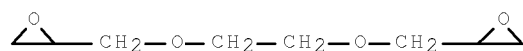
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CM 6

CRN 2224-15-9

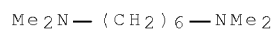
CMF C8 H14 O4



CM 7

CRN 111-18-2

CMF C10 H24 N2



RN 689295-70-3 HCAPLUS

CN 1,6-Hexanediamine, N,N,N',N'-tetramethyl-, polymer with α -[dimethyl[3-(oxiranylmethoxy)propyl]silyl]- ω -[[dimethyl[3-(oxiranylmethoxy)propyl]silyl]oxy]poly[oxy(dimethylsilylene)] and 1,1,3,3-tetramethyl-1,3-bis[3-(oxiranylmethoxy)propyl]disiloxane, acetate (salt) dodecanoate (salt), compd. with N,N-dimethylmethanamine (9CI) (CA INDEX NAME)

CM 1

CRN 143-07-7

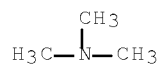
CMF C12 H24 O2



CM 2

CRN 75-50-3

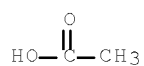
CMF C3 H9 N



CM 3

CRN 64-19-7

CMF C2 H4 O2



CM 4

CRN 689295-69-0

CMF (C16 H34 O5 Si2 . C10 H24 N2 . (C2 H6 O Si)n C16 H34 O5 Si2)x

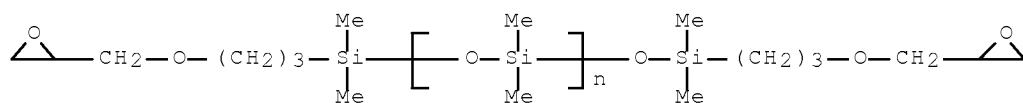
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CM 5

CRN 130167-23-6

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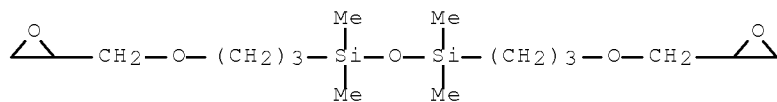
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CM 6

CRN 126-80-7

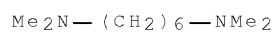
CMF C16 H34 O5 Si2



CM 7

CRN 111-18-2

CMF C10 H24 N2



OSC.G 3 THERE ARE 3 CAPLUS RECORDS THAT CITE THIS RECORD (3 CITINGS)
 RE.CNT 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD
 ALL CITATIONS AVAILABLE IN THE RE FORMAT

L80 ANSWER 5 OF 23 HCAPLUS COPYRIGHT 2009 ACS on STN
 AN 2004:413005 HCAPLUS Full-text
 DN 140:408672
 TI Linear polyamino and/or polyammonium polysiloxane copolymers
 IN Lange, Horst; Witossek, Anita; Wagner, Roland; Stachulla, Karl-Heinz; Graydon, Andrew Russell; Hartshorn, Richard Timothy; Boutique, Jean-Pol; Delplanque, Patrick Firmin August; Johnston, James Pyott; Sockel, Karl-Heinz
 PA GE Bayer Silicones GmbH & Co. KG, Germany
 SO PCT Int. Appl., 73 pp.
 CODEN: PIXXD2
 DT Patent
 LA German
 FAN.CNT 1

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|------|--------------|------------------|--------------|
| WO 2004041912 | A1 | 20040521 | WO 2003-EP50775 | 20031031 <-- |
| W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW | | | | |
| RW: BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG | | | | |
| CA 2504910 | A1 | 20040521 | CA 2003-2504910 | 20031031 <-- |
| AU 2003301852 | A1 | 20040607 | AU 2003-301852 | 20031031 <-- |
| EP 1565512 | A1 | 20050824 | EP 2003-810455 | 20031031 <-- |
| R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK | | | | |
| BR 2003016000 | A | 20050913 | BR 2003-16000 | 20031031 <-- |
| CN 1735648 | A | 20060215 | CN 2003-80108252 | 20031031 <-- |
| CN 100457804 | C | 20090204 | | |
| JP 2006505644 | T | 20060216 | JP 2004-549175 | 20031031 <-- |
| US 20060223939 | A1 | 20061005 | US 2003-533769 | 20031031 <-- |
| MX 2005004762 | A | 20050803 | MX 2005-4762 | 20050503 <-- |
| US 7563857 | B2 | 20090721 | US 2006-533769 | 20060320 <-- |
| PRAI DE 2002-10251526 | A | 20021104 <-- | | |
| WO 2003-EP50775 | W | 20031031 <-- | | |

ASSIGNMENT HISTORY FOR US PATENT AVAILABLE IN LSUS DISPLAY FORMAT

AB The title polymers, especially hydrophilic polyquaternary polysiloxane copolymer, having ether groups in the chain backbones and salt groups in the side chains or on the chain backbones are useful as a washing-resistant laundry fabric softeners and in detergents, drying compns. for surface treatment and cosmetics. An ionene-siloxane manufactured by heating imidazole-terminated di-Me siloxane 50, imidazole 2.38, epichlorohydrin 3.24, and diethylene glycol bis(chloroacetate) 0.91 g in iso-PrOH at 80° for 14.5 h exhibits, as a fabric softener (e.g., for cotton), an excellent resistance to common detergent laundering.

IC ICM C08G0077-54
 ICS D06M0015-643

CC 46-5 (Surface Active Agents and Detergents)
 Section cross-reference(s): 62

- ST polysiloxane salt amino modified laundry fabric softener; ionene polysiloxane polyquaternary amino group contg manuf; textile finishing agent amino modified polysiloxane salt; fabric softener cotton resistance detergent laundering; siloxane imidazole epichlorohydrin diethylene glycol chloroacetate manuf
- IT Polysiloxanes, uses
 RL: COS (Cosmetic use); IMF (Industrial manufacture); TEM (Technical or engineered material use); BIOL (Biological study); PREP (Preparation); USES (Uses)
 (ionene-polyether-; linear polyamino and/or polyammonium polysiloxane copolymers useful as fabric softeners and in detergents, drying compns. for surface treatment and cosmetics.)
- IT Polyethers, uses
 RL: COS (Cosmetic use); IMF (Industrial manufacture); TEM (Technical or engineered material use); BIOL (Biological study); PREP (Preparation); USES (Uses)
 (ionene-polysiloxane-; linear polyamino and/or polyammonium polysiloxane copolymers useful as fabric softeners and in detergents, drying compns. for surface treatment and cosmetics.)
- IT Cosmetics
 Detergents
 Fabric softeners
 Laundering
 Surface treatment
 (linear polyamino and/or polyammonium polysiloxane copolymers useful as fabric softeners and in detergents, drying compns. for surface treatment and cosmetics.)
- IT Ionene polymers
 RL: COS (Cosmetic use); IMF (Industrial manufacture); TEM (Technical or engineered material use); BIOL (Biological study); PREP (Preparation); USES (Uses)
 (polyether-polysiloxane-; linear polyamino and/or polyammonium polysiloxane copolymers useful as fabric softeners and in detergents, drying compns. for surface treatment and cosmetics.)
- IT 689295-66-7P 689295-67-8P 689295-70-3P
 690233-16-8P
 RL: COS (Cosmetic use); IMF (Industrial manufacture); TEM (Technical or engineered material use); BIOL (Biological study); PREP (Preparation); USES (Uses)
 (linear polyamino and/or polyammonium polysiloxane copolymers useful as fabric softeners and in detergents, drying compns. for surface treatment and cosmetics.)
- IT 79-04-9, Chloroacetyl chloride 111-46-6, Diethylene glycol, reactions
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (linear polyamino and/or polyammonium polysiloxane copolymers useful as fabric softeners and in detergents, drying compns. for surface treatment and cosmetics.)
- IT 109-01-3, N-Methylpiperazine 288-32-4, Imidazole, reactions
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (monomer precursor; linear polyamino and/or polyammonium polysiloxane copolymers useful as fabric softeners and in detergents, drying compns. for surface treatment and cosmetics.)
- IT 154394-31-7P, Diethylene glycol bis(dichloroacetate)
 402922-85-4P 690233-14-8P
 RL: IMF (Industrial manufacture); RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent)
 (monomer; linear polyamino and/or polyammonium

polysiloxane copolymers useful as fabric softeners and in
detergents, drying compns. for surface treatment and cosmetics.)

IT 690233-18-2P

RL: COS (Cosmetic use); IMF (Industrial manufacture); TEM (Technical or
engineered material use); BIOL (Biological study); PREP (Preparation);
USES (Uses)

(polyamino and/or polyammonium polysiloxane
copolymers useful as fabric softeners and in detergents, drying compns.
for surface treatment and cosmetics.)

IT 689295-66-7P 689295-67-8P 689295-70-3P
690233-16-0P

RL: COS (Cosmetic use); IMF (Industrial manufacture); TEM (Technical or
engineered material use); BIOL (Biological study); PREP (Preparation);
USES (Uses)

(linear polyamino and/or polyammonium polysiloxane
copolymers useful as fabric softeners and in detergents, drying compns.
for surface treatment and cosmetics.)

RN 689295-66-7 HCAPLUS

CN 1,6-Hexanediamine, N,N,N',N'-tetramethyl-, polymer with
 α -[dimethyl[3-(oxiranylmethoxy)propyl]silyl]- ω -[[dimethyl[3-
(oxiranylmethoxy)propyl]silyl]oxy]poly[oxy(dimethylsilylene)] and
2,2'-[1,2-ethanediylbis(oxymethylene)]bis[oxirane], acetate (salt)
dodecanoate (salt), compd. with N,N-dimethylmethanamine (9CI) (CA INDEX
NAME)

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CRN 143-07-7

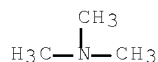
CMF C12 H24 O2



CM 2

CRN 75-50-3

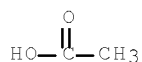
CMF C3 H9 N



CM 3

CRN 64-19-7

CMF C2 H4 O2



CM 4

CRN 689295-65-6

CMF (C10 H24 N2 . C8 H14 O4 . (C2 H6 O Si)n C16 H34 O5 Si2)x

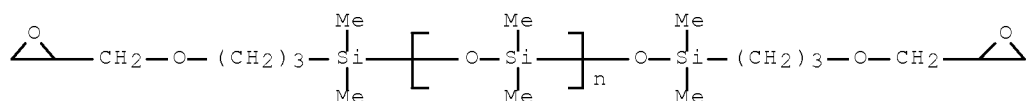
CCI PMS

CM 5

CRN 130167-23-6

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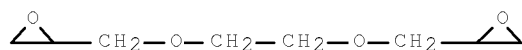
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CM 6

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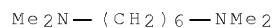
CMF C8 H14 O4



CM 7

CRN 111-18-2

CMF C10 H24 N2



RN 689295-67-8 HCAPLUS

CN 1H-Imidazole-1-propanamine, polymer with

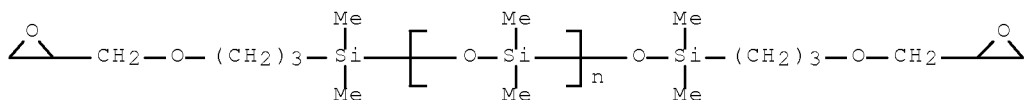
α -[dimethyl[3-(oxiranylmethoxy)propyl]silyl]- ω -[[dimethyl[3-(oxiranylmethoxy)propyl]silyl]oxy]poly[oxy(dimethylsilylene)] and 2,2'-[(2,2-dimethyl-1,3-propanediyl)bis(oxymethylene)]bis[oxirane] (9CI) (CA INDEX NAME)

CM 1

CRN 130167-23-6

CMF (C2 H6 O Si)n C16 H34 O5 Si2

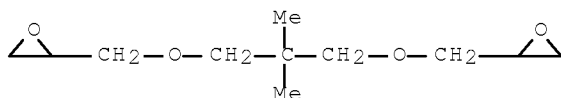
CCI PMS



CM 2

CRN 17557-23-2

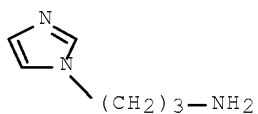
CMF C11 H20 O4



CM 3

CRN 5036-48-6

CMF C6 H11 N3



RN 689295-70-3 HCAPLUS

CN 1,6-Hexanediamine, N,N,N',N'-tetramethyl-, polymer with
 α -[dimethyl[3-(oxiranylmethoxy)propyl]silyl]- ω -[[dimethyl[3-(oxiranylmethoxy)propyl]silyl]oxy]poly[oxy(dimethylsilylene)] and
 1,1,3,3-tetramethyl-1,3-bis[3-(oxiranylmethoxy)propyl]disiloxane, acetate
 (salt) dodecanoate (salt), compd. with N,N-dimethylmethanamine (9CI) (CA
 INDEX NAME)

CM 1

CRN 143-07-7

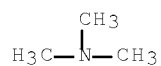
CMF C12 H24 O2



CM 2

CRN 75-50-3

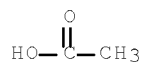
CMF C3 H9 N



CM 3

CRN 64-19-7

CMF C2 H4 O2



CM 4

CRN 689295-69-0

CMF (C16 H34 O5 Si2 . C10 H24 N2 . (C2 H6 O Si)n C16 H34 O5 Si2)x

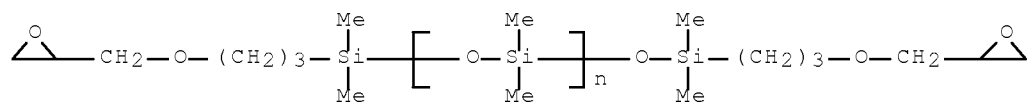
CCI PMS

CM 5

CRN 130167-23-6

CMF (C2 H6 O Si)n C16 H34 O5 Si2

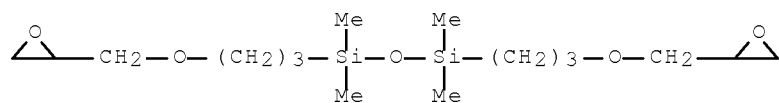
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CM 6

CRN 126-80-7

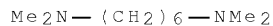
CMF C16 H34 O5 Si2



CM 7

CRN 111-18-2

CMF C10 H24 N2



RN 690233-16-0 HCAPLUS

CN Acetic acid, dichloro-, oxydi-2,1-ethanediyl ester, polymer with (chloromethyl)oxirane, α -[[3-[2-hydroxy-3-(1H-imidazol-1-yl)propoxy]propyl]dimethylsilyl]- ω -[[[3-[2-hydroxy-3-(1H-imidazol-1-yl)propoxy]propyl]dimethylsilyl]oxy]poly[oxy(dimethylsilylene)] and 1H-imidazole, chloride (9CI) (CA INDEX NAME)

CM 1

CRN 690233-15-9

CMF (C8 H10 Cl4 O5 . C3 H5 Cl O . C3 H4 N2 . (C2 H6 O Si)n C22 H42 N4 O5 Si2)x

CCI PMS

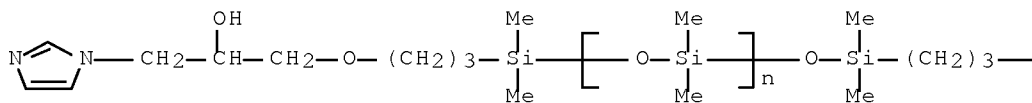
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CRN 690233-14-8

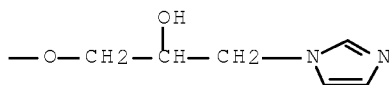
CMF (C2 H6 O Si)n C22 H42 N4 O5 Si2

CCI PMS

PAGE 1-A



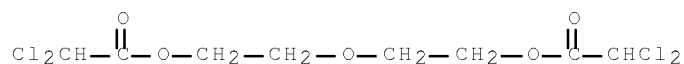
PAGE 1-B



CM 3

CRN 154394-31-7

CMF C8 H10 Cl4 O5



CM 4

CRN 288-32-4

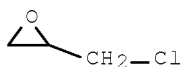
CMF C3 H4 N2



CM 5

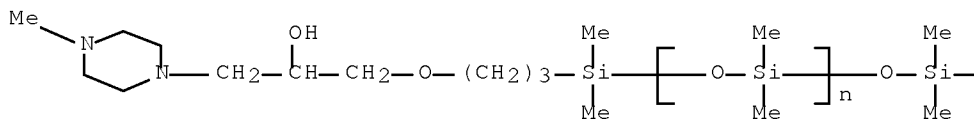
CRN 106-89-8

CMF C3 H5 Cl O

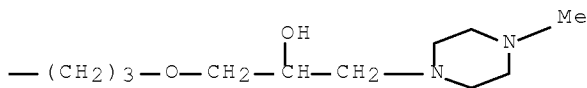


IT 402922-85-4P 690233-14-8P
 RL: IMF (Industrial manufacture); RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent)
 (monomer; linear polyamino and/or polyammonium polysiloxane copolymers useful as fabric softeners and in detergents, drying compns. for surface treatment and cosmetics.)
 RN 402922-85-4 HCAPLUS
 CN Poly[oxy(dimethylsilylene)], α -[[3-[2-hydroxy-3-(4-methyl-1-piperazinyl)propoxy]propyl]dimethylsilyl]- ω -[[3-[2-hydroxy-3-(4-methyl-1-piperazinyl)propoxy]propyl]dimethylsilyl]oxy]- (9CI) (CA INDEX NAME)

PAGE 1-A



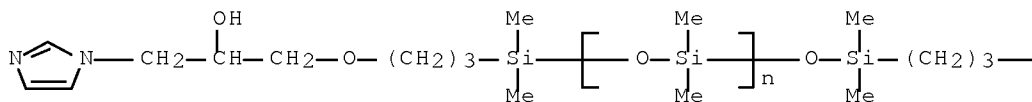
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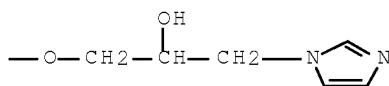
RN 690233-14-8 HCAPLUS

CN Poly[oxy(dimethylsilylene)], α -[[3-[2-hydroxy-3-(1H-imidazol-1-yl)propoxy]propyl]dimethylsilyl]- ω -[[3-[2-hydroxy-3-(1H-imidazol-1-yl)propoxy]propyl]dimethylsilyl]oxy]- (9CI) (CA INDEX NAME)

PAGE 1-A



PAGE 1-B



IT 690233-18-2F

RL: COS (Cosmetic use); IMF (Industrial manufacture); TEM (Technical or engineered material use); BIOL (Biological study); PREP (Preparation); USES (Uses)

(polyamino and/or polyammonium polysiloxane copolymers useful as fabric softeners and in detergents, drying compns. for surface treatment and cosmetics.)

RN 690233-18-2 HCAPLUS

CN Acetic acid, dichloro-, oxydi-2,1-ethanediyl ester, polymer with α -[[3-[2-hydroxy-3-(4-methyl-1-piperazinyl)propoxy]propyl]dimethylsilyl]- ω -[[[3-[2-hydroxy-3-(4-methyl-1-piperazinyl)propoxy]propyl]dimethylsilyl]oxy]poly[oxy(dimethylsilylene)] and piperazine, chloride (9CI) (CA INDEX NAME)

CM 1

CRN 690233-17-1

CMF (C8 H10 Cl4 O5 . C4 H10 N2 . (C2 H6 O Si)n C26 H58 N4 O5 Si2)x

CCI PMS

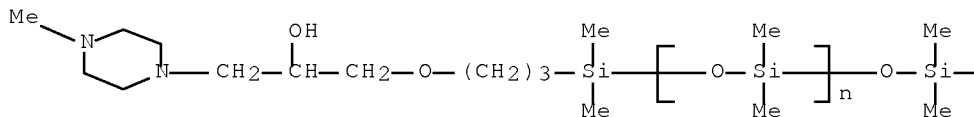
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CRN 402922-85-4

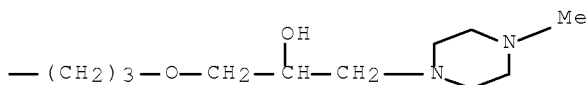
CMF (C2 H6 O Si)n C26 H58 N4 O5 Si2

CCI PMS

PAGE 1-A

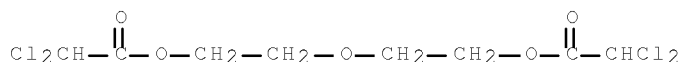


PAGE 1-B



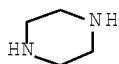
CM 3

CRN 154394-31-7
 CMF C8 H10 Cl4 O5



CM 4

CRN 110-85-0
 CMF C4 H10 N2



OSC.G 1 THERE ARE 1 CAPLUS RECORDS THAT CITE THIS RECORD (1 CITINGS)
 RE.CNT 8 THERE ARE 8 CITED REFERENCES AVAILABLE FOR THIS RECORD
 ALL CITATIONS AVAILABLE IN THE RE FORMAT

L80 ANSWER 6 OF 23 HCAPLUS COPYRIGHT 2009 ACS on STN

AN 2004:392558 HCAPLUS Full-text

DN 140:408668

TI Anti-soiling detergent composition

IN Yaghi, Mari; Sado, Mitsuo; Abe, Yuki

PA Johnsondiversey, Inc., USA

SO PCT Int. Appl., 40 pp.

CODEN: PIXXD2

DT Patent

LA English

FAN.CNT 1

| | PATENT NO. | KIND | DATE | APPLICATION NO. | DATE | |
|----|---------------|------|----------|--|--------------|--|
| PI | WO 2004039931 | A1 | 20040513 | WO 2003--US33396 | 20031021 <-- | |
| | W: | | | AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW | | |
| | RW: | | | GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG | | |
| | JP 2004162041 | A | 20040610 | JP 2003-356224 | 20031016 <-- | |
| | CA 2502606 | A1 | 20040513 | CA 2003-2502606 | 20031021 <-- | |
| | CA 2502606 | C | 20090106 | | | |
| | AU 2003280001 | A1 | 20040525 | AU 2003-280001 | 20031021 <-- | |
| | AU 2003280001 | B2 | 20090716 | | | |

| | | | | |
|--|----|----------|------------------|--------------|
| EP 1554368 | A1 | 20050720 | EP 2003-773307 | 20031021 <-- |
| EP 1554368 | B1 | 20070307 | | |
| R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK | | | | |
| BR 2003015635 | A | 20050823 | BR 2003-15635 | 20031021 <-- |
| CN 1717472 | A | 20060104 | CN 2003-80104104 | 20031021 <-- |
| AT 356188 | T | 20070315 | AT 2003-773307 | 20031021 <-- |
| NZ 539507 | A | 20070629 | NZ 2003-539507 | 20031021 <-- |
| ES 2279184 | T3 | 20070816 | ES 2003-773307 | 20031021 <-- |
| US 20060154840 | A1 | 20060713 | US 2005-532321 | 20050422 <-- |
| MX 2005004414 | A | 20050726 | MX 2005-4414 | 20050425 <-- |
| US 20080041418 | A1 | 20080221 | US 2007-877288 | 20071023 <-- |
| US 7375068 | B2 | 20080520 | | |
| PRAI JP 2002-310790 | A | 20021025 | <-- | |
| JP 2003-356224 | A | 20031016 | <-- | |
| WO 2003-US33396 | W | 20031021 | <-- | |
| US 2005-532321 | A1 | 20050422 | | |

ASSIGNMENT HISTORY FOR US PATENT AVAILABLE IN LSUS DISPLAY FORMAT

AB An anti-soiling detergent composition has excellent detergency, endows cleaned surfaces with a pronounced anti-soiling effect, effectively sustains the anti-staining effect, possesses superb storage stability, and can be used on restrooms, sinks, baths, and other damp, hard surfaces. The anti-soiling detergent composition contains (A) 0.05-10% polyetheramide-modified organopolysiloxane and/or amino-modified organopolysiloxane, (B) 0.1-30% specific surfactant, (C) 0.1-20% metal chelating agent, and (D) H2O.

IC ICM C11D0003-37

CC 46-5 (Surface Active Agents and Detergents)

ST polyetheramide polysiloxane antisoiling detergent
bathroom surface; amino polysiloxane antisoiling detergent
bathroom surface

IT Polysiloxanes
RL: TEM (Technical or engineered material use); USES (Uses)
(3-[(2-aminoethyl)amino]propyl Me, di-Me, SF 8417; in antisoiling detergent composition for damp hard surfaces)

IT Polysiloxanes
RL: TEM (Technical or engineered material use); USES (Uses)
(amino; in antisoiling detergent composition for damp hard surfaces)

IT Quaternary ammonium compounds
RL: TEM (Technical or engineered material use); USES (Uses)
(benzyl-C12-14-alkyldimethyl, chlorides, Cation G 50, surfactant; in antisoiling detergent composition for damp hard surfaces)

IT Polysiloxanes
RL: TEM (Technical or engineered material use); USES (Uses)
(polyamide-polyether-; in antisoiling detergent composition for damp hard surfaces)

IT Polyethers
RL: TEM (Technical or engineered material use); USES (Uses)
(polyamide-siloxane-; in antisoiling detergent composition for damp hard surfaces)

IT Polyamides
RL: TEM (Technical or engineered material use); USES (Uses)
(polyether-siloxane-; in antisoiling detergent composition for damp hard surfaces)

IT 60-00-4, EDTA, uses 77-92-9, Citric acid, uses 994-36-5, Sodium citrate 5064-31-3 271260-32-3D,
Dimethylsilanediol-methylsilanediol-oxirane graft copolymer dodecyl ether, trimethylsilyl-terminated 688349-31-7D, trimethylsilyl-terminated 688349-33-9D, trimethylsilyl-terminated
RL: TEM (Technical or engineered material use); USES (Uses)
(in antisoiling detergent composition for damp hard surfaces)

IT 7173-51-5, Bardac 2280 9043-30-5, Lutensol TO 8 688789-86-8,
 Naroakty ID 70 688789-88-0, Tego Betain L 10S
 RL: TEM (Technical or engineered material use); USES (Uses)
 (surfactant; in antisoiling detergent composition for damp hard surfaces)

IT 271260-32-3D, Dimethylsilanediol-methylsilanediol-oxirane graft
 copolymer dodecyl ether, trimethylsilyl-terminated
 RL: TEM (Technical or engineered material use); USES (Uses)
 (in antisoiling detergent composition for damp hard surfaces)

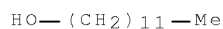
RN 271260-32-3 HCAPLUS

CN Silanediol, 1,1-dimethyl-, polymer with 1-methylsilanediol and oxirane,
 dodecyl ether, graft (CA INDEX NAME)

CM 1

CRN 112-53-8

CMF C12 H26 O



CM 2

CRN 156310-28-0

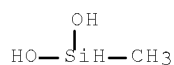
CMF (C2 H8 O2 Si . C2 H4 O . C H6 O2 Si)x

CCI PMS

CM 3

CRN 43641-90-3

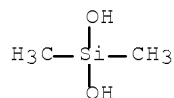
CMF C H6 O2 Si



CM 4

CRN 1066-42-8

CMF C2 H8 O2 Si



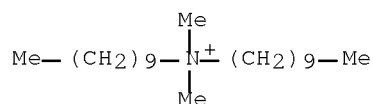
CM 5

CRN 75-21-8

CMF C2 H4 O



IT 7173-51-5, Bardac 2280
 RL: TEM (Technical or engineered material use); USES (Uses)
 (surfactant; in antisoiling detergent composition for damp hard surfaces)
 RN 7173-51-5 HCAPLUS
 CN 1-Decanaminium, N-decyl-N,N-dimethyl-, chloride (1:1) (CA INDEX NAME)



OSC.G 1 THERE ARE 1 CAPLUS RECORDS THAT CITE THIS RECORD (1 CITINGS)
 RE.CNT 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD
 ALL CITATIONS AVAILABLE IN THE RE FORMAT

L80 ANSWER 7 OF 23 HCAPLUS COPYRIGHT 2009 ACS on STN

AN 2004:392296 HCAPLUS Full-text

DN 140:408666

TI Fabric treatment compositions comprising different silicones, a process
 for preparing them and a method for using them

IN Boutique, Jean-pol; Delplancke, Patrick Firmin August; Wagner,
 Roland; Butts, Matthew David; Genovese, Sarah Elizabeth

PA The Procter & Gamble Company, USA

SO U.S. Pat. Appl. Publ., 18 pp.

CODEN: USXXCO

DT Patent

LA English

FAN.CNT 1

| | PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|----|---|------|----------|-----------------|--------------|
| PI | US 20040092424 | A1 | 20040513 | US 2003-700809 | 20031104 <-- |
| | US 6833344 | B2 | 20041221 | | |
| | CA 2502310 | A1 | 20040521 | CA 2003-2502310 | 20031029 <-- |
| | WO 2004041987 | A1 | 20040521 | WO 2003-US34492 | 20031029 <-- |
| | W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, | | | | |
| | CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, | | | | |
| | GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KZ, LC, LK, | | | | |
| | LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, | | | | |
| | OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, | | | | |
| | TN, TR, TT, TZ, UA, UG, UZ, VC, VN, YU, ZA, ZM, ZW | | | | |
| | RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, | | | | |
| | KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, | | | | |
| | FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, | | | | |
| | BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG | | | | |
| | AU 2003284376 | A1 | 20040607 | AU 2003-284376 | 20031029 <-- |
| | EP 1558719 | A1 | 20050803 | EP 2003-776613 | 20031029 <-- |

R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,
IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK

| | | | | |
|---------------|---|----------|------------------|--------------|
| BR 2003015981 | A | 20050920 | BR 2003-15981 | 20031029 <-- |
| CN 1705736 | A | 20051207 | CN 2003-80101910 | 20031029 <-- |
| JP 2006504002 | T | 20060202 | JP 2004-550256 | 20031029 <-- |
| MX 2005004807 | A | 20050722 | MX 2005-4807 | 20050504 <-- |

PRAI US 2002-423485P P 20021104 <--
WO 2003-US34492 W 20031029 <--

AB The fabric treatment compns. for providing improved fabric care comprise (a) ≥ 1 cationic silicone polymers containing ≥ 1 polysiloxane units and ≥ 1 quaternary N moieties, and (b) ≥ 1 N-free silicone polymers, wherein the a/b weight ratio is (0.01-10):1, preferably (0.05-5):1, and more preferably (0.1-1):1. The fabric treatment compns. can be used as rinse-added fabric softening compns., fabric finishing compns., laundry detergent compns., and combinations thereof.

IC ICM C11D0001-00

INCL 510466000; 510475000

CC 46-5 (Surface Active Agents and Detergents)

ST cationic silicone fabric care treatment; polysiloxane fabric treatment laundry

IT Polysiloxanes, uses
RL: TEM (Technical or engineered material use); USES (Uses)
(fabric treatment compns. containing different silicones for providing improved fabric care)

IT Polysiloxanes, uses
RL: TEM (Technical or engineered material use); USES (Uses)
(polyoxyalkylene-, block, terminal quaternary ammonium group-containing, cationic; fabric treatment compns. containing different silicones for providing improved fabric care)

IT Polyoxyalkylenes, uses
RL: TEM (Technical or engineered material use); USES (Uses)
(polysiloxane-, block, terminal quaternary ammonium group-containing, cationic; fabric treatment compns. containing different silicones for providing improved fabric care)

IT Quaternary ammonium compounds, uses
RL: TEM (Technical or engineered material use); USES (Uses)
(polysiloxane-; fabric treatment compns. containing different silicones for providing improved fabric care)

IT Polysiloxanes, uses
RL: TEM (Technical or engineered material use); USES (Uses)
(terminal quaternary ammonium group-containing, cationic; fabric treatment compns. containing different silicones for providing improved fabric care)

IT 31900-57-9, Polydimethylsiloxane
RL: TEM (Technical or engineered material use); USES (Uses)
(**assumed monomers**; fabric treatment compns. containing different silicones for providing improved fabric care)

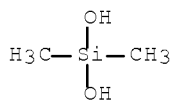
IT 9016-00-6, Polydimethylsiloxane
RL: TEM (Technical or engineered material use); USES (Uses)
(fabric treatment compns. containing different silicones for providing improved fabric care)

IT 31900-57-9, Polydimethylsiloxane
RL: TEM (Technical or engineered material use); USES (Uses)
(**assumed monomers**; fabric treatment compns. containing different silicones for providing improved fabric care)

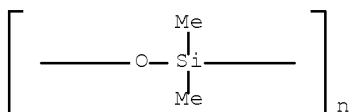
RN 31900-57-9 HCAPLUS

CN Silanediol, 1,1-dimethyl-, homopolymer (CA INDEX NAME)

CRN 1066-42-8
CMF C2 H8 O2 Si



IT 9016-00-6, Polydimethylsiloxane
RL: TEM (Technical or engineered material use); USES (Uses)
(fabric treatment compns. containing different silicones for providing improved fabric care)
RN 9016-00-6 HCAPLUS
CN Poly[oxy(dimethylsilylene)] (CA INDEX NAME)



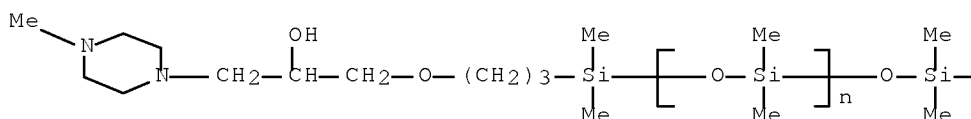
OSC.G 3 THERE ARE 3 CAPLUS RECORDS THAT CITE THIS RECORD (3 CITINGS)
RE.CNT 41 THERE ARE 41 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L80 ANSWER 8 OF 23 HCAPLUS COPYRIGHT 2009 ACS on STN
AN 2003:117943 HCAPLUS Full-text
DN 138:155398
TI Fabric care systems providing anti-wrinkle benefits to fabric containing quaternary ammonium silicone compound
IN Zhang, Shulin Larry; Littig, Janet Sue; Casado-Dominiguez, Arturo Luis
PA The Procter & Gamble Company, USA
SO PCT Int. Appl., 40 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 1

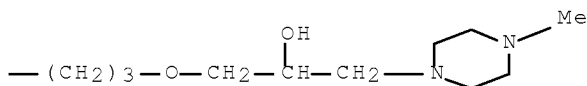
| | PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|----|---|------|----------|-----------------|--------------|
| PI | WO 2003012020 | A2 | 20030213 | WO 2002-US23451 | 20020723 <-- |
| | WO 2003012020 | A3 | 20031030 | | |
| | W: | | | | |
| | AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, | | | | |
| | CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, | | | | |
| | GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, | | | | |
| | LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, | | | | |
| | PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, | | | | |
| | UA, UG, UZ, VN, YU, ZA, ZM, ZW | | | | |
| | RW: | | | | |
| | GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, | | | | |
| | KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, | | | | |
| | FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, SK, TR, BF, BJ, CF, | | | | |
| | CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG | | | | |
| | US 20030096728 | A1 | 20030522 | US 2002-196398 | 20020716 <-- |
| | US 6818610 | B2 | 20041116 | | |
| | CA 2451920 | A1 | 20030213 | CA 2002-2451920 | 20020723 <-- |

AU 2002355829 A1 20030217 AU 2002-355829 20020723 <--
 EP 1412465 A2 20040428 EP 2002-752548 20020723 <--
 R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,
 IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, SK
 JP 2005520058 T 20050707 JP 2003-517198 20020723 <--
 JP 4101751 B2 20080618
 MX 2004000791 A 20040521 MX 2004-791 20040126 <--
 US 20040259762 A1 20041223 US 2004-896109 20040721 <--
 US 7196048 B2 20070327
 PRAI US 2001-308204P P 20010727 <--
 US 2002-352840P P 20020130 <--
 US 2002-196398 A3 20020716 <--
 WO 2002-US23451 W 20020723 <--
 AB An anti-wrinkle fabric treatment composition used as a fabric rinse additive composition, comprises: (a) about 0.01-20 wt% of a cationic silicone polymer or copolymer having the formula of [CAP]-Zm-[CAP] wherein each Z unit comprises at least one secondary, tertiary, or quaternary amino moiety, or mixts. thereof; [CAP] is a backbone termination or truncation unit; m = 1-50. (b) about 1-30 wt% of a scavenger effective in scavenging compds. comprising an anionic unit; and (c) the balance a carrier system.
 IC ICM C11D0003-37
 ICS C11D0003-00; C11D0001-62
 CC 46-5 (Surface Active Agents and Detergents)
 IT 394220-52-1P 402922-85-4P 402922-88-7P 496878-30-9P
 RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)
 (fabric care system providing anti-wrinkle benefits to fabric)
 IT 402922-85-4P
 RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)
 (fabric care system providing anti-wrinkle benefits to fabric)
 RN 402922-85-4 HCAPLUS
 CN Poly[oxy(dimethylsilylene)], α -[[3-[2-hydroxy-3-(4-methyl-1-piperazinyl)propoxy]propyl]dimethylsilyl]- ω -[[[3-[2-hydroxy-3-(4-methyl-1-piperazinyl)propoxy]propyl]dimethylsilyl]oxy]- (9CI) (CA INDEX NAME)

PAGE 1-A



PAGE 1-B



OSC.G 1 THERE ARE 1 CAPLUS RECORDS THAT CITE THIS RECORD (1 CITINGS)
 RE.CNT 9 THERE ARE 9 CITED REFERENCES AVAILABLE FOR THIS RECORD
 ALL CITATIONS AVAILABLE IN THE RE FORMAT

L80 ANSWER 9 OF 23 HCAPLUS COPYRIGHT 2009 ACS on STN
 AN 2002:172034 HCAPLUS Full-text
 DN 136:233928

TI Fabric care compositions comprising cationic silicones and treatment of fabrics
 IN Masschelein, Axel; Delplancke, Patrick Firmin August; Salden, Ivo; Boutique, Jean-pol; Johnston, James Pyott; Smerznak, Mark Allen; Broeckx, Walter August Maria; Merere, Ingrid; Trujillo, Rosaldo Rafael
 PA The Procter & Gamble Company, USA
 SO PCT Int. Appl., 50 pp.
 CODEN: PIXXD2
 DT Patent
 LA English
 FAN.CNT 1

| | PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|------|---|------|----------|-----------------|--------------|
| PI | WO 2002018528 | A1 | 20020307 | WO 2001-US26444 | 20010824 <-- |
| | W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZW | | | | |
| | RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG | | | | |
| | US 20020103094 | A1 | 20020801 | US 2001-935927 | 20010823 <-- |
| | US 6903061 | B2 | 20050607 | | |
| | CA 2417654 | A1 | 20020307 | CA 2001-2417654 | 20010824 <-- |
| | AU 2001086709 | A | 20020313 | AU 2001-86709 | 20010824 <-- |
| | EP 1313828 | A1 | 20030528 | EP 2001-966172 | 20010824 <-- |
| | EP 1313828 | B1 | 20061011 | | |
| | R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR | | | | |
| | BR 2001013586 | A | 20030722 | BR 2001-13586 | 20010824 <-- |
| | JP 2005513278 | T | 20050512 | JP 2002-524031 | 20010824 <-- |
| | AU 2001286709 | B2 | 20051006 | AU 2001-286709 | 20010824 <-- |
| | AT 342331 | T | 20061115 | AT 2001-966172 | 20010824 <-- |
| | ES 2273881 | T3 | 20070516 | ES 2001-966172 | 20010824 <-- |
| | CN 100422300 | C | 20081001 | CN 2001-817811 | 20010824 <-- |
| | MX 2003001789 | A | 20030604 | MX 2003-1789 | 20030227 <-- |
| | US 20050164900 | A1 | 20050728 | US 2005-40038 | 20050121 <-- |
| | US 7384903 | B2 | 20080610 | | |
| PRAI | US 2000-228170P | P | 20000828 | <-- | |
| | US 2000-243825P | P | 20001027 | <-- | |
| | US 2000-249059P | P | 20001115 | <-- | |
| | US 2001-268174P | P | 20010212 | <-- | |
| | US 2001-935927 | A1 | 20010823 | <-- | |
| | WO 2001-US26444 | W | 20010824 | <-- | |

ASSIGNMENT HISTORY FOR US PATENT AVAILABLE IN LSUS DISPLAY FORMAT

AB Domestic laundering of fabrics incorporate treatment agents comprising selected cationic silicones. A fabric care composition also contains ≥ 1 laundry adjunct agents selected from stabilizers, e.g. trihydroxystearin, nonionic surfactant, cationic surfactant, coupling agent, builders, perfume, dye or surfactant scavenger, fabric softener, enzyme, chelant, solvent, effervescent, encapsulant, or mixts. of these.
 IC ICM C11D0003-37
 ICS D06M0015-643
 CC 46-5 (Surface Active Agents and Detergents)
 IT 26755-51-1P, Propargyl α -chloroacetate 394220-51-0P 395660-27-2P 402922-85-4P
 RL: IMF (Industrial manufacture); RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent)

(fabric care compns. comprising cationic silicones for softness and wrinkle recovery in home laundering of fabrics)

IT 402922-85-4P

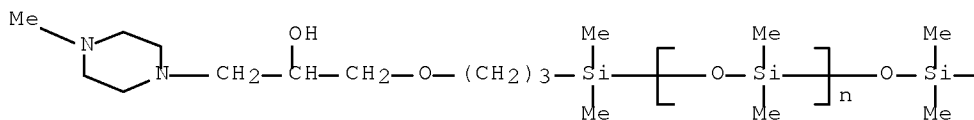
RL: IMF (Industrial manufacture); RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent)

(fabric care compns. comprising cationic silicones for softness and wrinkle recovery in home laundering of fabrics)

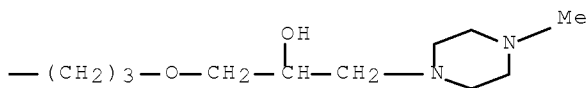
RN 402922-85-4 HCAPLUS

CN Poly[oxy(dimethylsilylene)], α -[[3-[2-hydroxy-3-(4-methyl-1-piperazinyl)propoxy]propyl]dimethylsilyl]- ω -[[[3-[2-hydroxy-3-(4-methyl-1-piperazinyl)propoxy]propyl]dimethylsilyl]oxy]- (9CI) (CA INDEX NAME)

PAGE 1-A



PAGE 1-B



OSC.G 17 THERE ARE 17 CAPLUS RECORDS THAT CITE THIS RECORD (21 CITINGS)
RE.CNT 9 THERE ARE 9 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L80 ANSWER 10 OF 23 HCAPLUS COPYRIGHT 2009 ACS on STN

AN 2002:138788 HCAPLUS Full-text

DN 136:185798

TI Linear amino acid-modified polysiloxane salts and their manufacture and use

IN Lange, Horst; Wagner, Roland; Witossek, Anita; Stachulla, Karl-Heinz; Teuber, Siegfried

PA GE Bayer Silicones GmbH & Co. KG, Germany

SO Ger. Offen., 12 pp.

CODEN: GWXXBX

DT Patent

LA German

FAN.CNT 1

| | PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|------|------------------|------|----------|------------------|--------------|
| PI | DE 10036522 | A1 | 20020221 | DE 2000-10036522 | 20000727 <-- |
| PRAI | DE 2000-10036522 | | 20000727 | <-- | |

AB Tertiary amino acid-functionalized polysiloxanes having ether groups in the chain backbones and salt groups in the side chains or on the chain backbones are useful for cosmetics, polishes, drying compns. for hard surfaces, textile finishing agents, and laundry fabric softeners. A typical salt was manufactured by heating 1.78 g β -alanine and 1.12 g KOH in 200 mL iso-PrOH 15 min at reflux and adding 57.2 g α,ω -bis(3-glycidylloxypropyl)dimethylsilyl polydimethylsiloxane in 12 h at reflux temperature

IC ICM C08G0077-46

- ICS C08L0083-12; C09D0183-12; C11D0001-83; A61K0007-06
- CC 46-4 (Surface Active Agents and Detergents)
Section cross-reference(s): 40, 42, 62
- ST polysiloxane salt amino acid modified laundry fabric softener;
ionene polysiloxane tertiary amino acid contg manuf; textile
finishing agent amino acid modified polysiloxane salt; drying
compn amino acid modified polysiloxane salt; polish amino acid
modified polysiloxane salt; cosmetic amino acid modified
polysiloxane salt
- IT Polysiloxanes, uses
RL: COS (Cosmetic use); IMF (Industrial manufacture); TEM (Technical or
engineered material use); BIOL (Biological study); PREP (Preparation);
USES (Uses)
(ionene-polyether-; linear tertiary amino acid--modified
polysiloxane salts)
- IT Polyethers, uses
RL: COS (Cosmetic use); IMF (Industrial manufacture); TEM (Technical or
engineered material use); BIOL (Biological study); PREP (Preparation);
USES (Uses)
(ionene-polysiloxane-; linear tertiary amino acid--modified
polysiloxane salts)
- IT Cosmetics
Drying agents
Fabric finishing agents
Fabric softeners
(linear tertiary amino acid-modified polysiloxane salts)
- IT Polysiloxanes, uses
RL: COS (Cosmetic use); IMF (Industrial manufacture); TEM (Technical or
engineered material use); BIOL (Biological study); PREP (Preparation);
USES (Uses)
(polyamine-polyether-; linear tertiary amino
acid--modified polysiloxane salts)
- IT Polyethers, uses
RL: COS (Cosmetic use); IMF (Industrial manufacture); TEM (Technical or
engineered material use); BIOL (Biological study); PREP (Preparation);
USES (Uses)
(polyamine-polysiloxane-; linear tertiary amino
acid--modified polysiloxane salts)
- IT Ionene polymers
Polyamines
RL: COS (Cosmetic use); IMF (Industrial manufacture); TEM (Technical or
engineered material use); BIOL (Biological study); PREP (Preparation);
USES (Uses)
(polyether-polysiloxane-; linear tertiary amino
acid--modified polysiloxane salts)
- IT 106-78-5DP, Diethylene glycol bis(chloroacetate), ionenes with potassium
sarcosinate and bis(glycidyoxypropyl) polydimethylsiloxane
130167-23-6DP, ionenes with potassium sarcosinate and diethylene
glycol bis(chloroacetate) 400629-09-6P
RL: COS (Cosmetic use); IMF (Industrial manufacture); TEM (Technical or
engineered material use); BIOL (Biological study); PREP (Preparation);
USES (Uses)
(linear tertiary amino acid-modified polysiloxane salts)
- IT 31900-57-9DP, Dimethylsilanediol homopolymer,
glycidyoxypropyldimethylsilyl-terminated, ionenes with potassium
sarcosinate and diethylene glycol bis(chloroacetate) 56935-86-5DP,
Potassium sarcosinate, reaction products with bis(glycidyoxypropyl)
polydimethylsiloxane, ionenes with diethylene glycol
bis(chloroacetate)
RL: COS (Cosmetic use); IMF (Industrial manufacture); TEM (Technical or

engineered material use); BIOL (Biological study); PREP (Preparation);
USES (Uses)

(precursor; linear tertiary amino acid-modified polysiloxane salts)

IT 106-78-5P, Diethylene glycol bis(chloroacetate)
RL: IMF (Industrial manufacture); RCT (Reactant); PREP (Preparation); RACT
(Reactant or reagent)

(precursor; linear tertiary amino acid-modified polysiloxane salts)

IT 111-46-6, Diethylene glycol, reactions
RL: RCT (Reactant); RACT (Reactant or reagent)

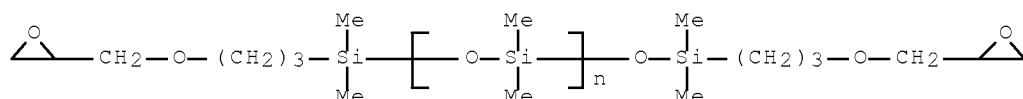
(precursor; linear tertiary amino acid-modified polysiloxane salts)

IT 130167-23-6DF, ionenes with potassium sarcosinate and diethylene glycol bis(chloroacetate) 400629-09-6P
RL: COS (Cosmetic use); IMF (Industrial manufacture); TEM (Technical or engineered material use); BIOL (Biological study); PREP (Preparation);
USES (Uses)

(linear tertiary amino acid-modified polysiloxane salts)

RN 130167-23-6 HCAPLUS

CN Poly[oxy(dimethylsilylene)], α -[dimethyl[3-(2-oxiranylmethoxy)propyl]silyl]- ω -[[dimethyl[3-(2-oxiranylmethoxy)propyl]silyl]oxy]- (CA INDEX NAME)



RN 400629-09-6 HCAPLUS

CN β -Alanine, polymer with α -[dimethyl[3-(oxiranylmethoxy)propyl]silyl]- ω -[[dimethyl[3-(oxiranylmethoxy)propyl]silyl]oxy]poly[oxy(dimethylsilylene)], potassium salt (9CI) (CA INDEX NAME)

CM 1

CRN 400629-08-5

CMF (C3 H7 N O2 . (C2 H6 O Si)_n C16 H34 O5 Si2)_x

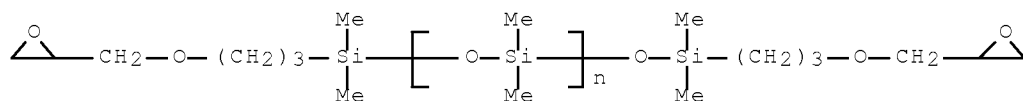
CCI PMS

CM 2

CRN 130167-23-6

CMF (C2 H6 O Si)_n C16 H34 O5 Si2

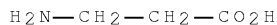
CCI PMS



CM 3

CRN 107-95-9

CMF C3 H7 N O2



IT 31900-57-9DP, Dimethylsilanediol homopolymer,
glycidylxypropyldimethylsilyl-terminated, ionenes with potassium
sarcosinate and diethylene glycol bis(chloroacetate)
RL: COS (Cosmetic use); IMF (Industrial manufacture); TEM (Technical or
engineered material use); BIOL (Biological study); PREP (Preparation);
USES (Uses)
(precursor; linear tertiary amino acid-modified polysiloxane
salts)

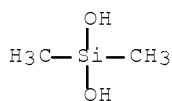
RN 31900-57-9 HCAPLUS

CN Silanediol, 1,1-dimethyl-, homopolymer (CA INDEX NAME)

CM 1

CRN 1066-42-8

CMF C2 H8 O2 Si



OSC.G 1 THERE ARE 1 CAPLUS RECORDS THAT CITE THIS RECORD (1 CITINGS)

RE.CNT 17 THERE ARE 17 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L80 ANSWER 11 OF 23 HCAPLUS COPYRIGHT 2009 ACS on STN

AN 2002:122503 HCAPLUS Full-text

DN 136:168927

TI Production of polyquaternary ammonium
polysiloxanes and their use as washfast hydrophilic softeners for
textiles

IN Lange, Horst; Wagner, Roland; Witossek, Anita; Stachulla,
Karl-Heinz; Teuber, Siegfried; Schnering, Albert; Moeller,
Annette

PA GE Bayer Silicones GmbH & Co. KG, Germany

SO Ger. Offen., 10 pp.

CODEN: GWXXBX

DT Patent

LA German

FAN.CNT 1

| | PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|------|------------------|------|----------|------------------|--------------|
| | ----- | ---- | ----- | ----- | ----- |
| PI | DE 10036533 | A1 | 20020214 | DE 2000-10036533 | 20000727 <-- |
| | DE 10036533 | B4 | 20050203 | | |
| | DE 10066215 | B4 | 20070322 | DE 2000-10066215 | 20000727 <-- |
| PRAI | DE 2000-10036533 | A3 | 20000727 | <-- | |

- AB Ionene-polysiloxanes having cyclic and(or) linear structures, useful as washfast softening agents for finishing textiles and as softening agents used with detergents, are manufactured by hydrosilylation of $H(SiMe_2O)_nSiHMe_2$ with epoxides having terminal olefin groups at 50-150° in the presence of a catalyst and reaction of the product with a mixture of a tertiary amine and a ditertiary amine in the presence of a HA acid at 40-120° and epoxide group-tertiary amine group-HA acid mol ratio 1:1:1.
- IC ICM C08G0077-46
ICS C08G0077-54; C08L0083-12; C08L0083-14; C09D0183-12; C09D0183-14; C11D0003-30; A61K0007-06
- CC 40-9 (Textiles and Fibers)
Section cross-reference(s): 46
- ST ionene polysiloxane fabric softener; polysiloxane unsatd epoxide adduct tertiary amine reaction
- IT Polysiloxanes, uses
RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(ionene-; production of polyquaternary ammonium polysiloxanes and their use as washfast hydrophilic softeners for textiles)
- IT Ionene polymers
RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(polysiloxane-; production of polyquaternary ammonium polysiloxanes and their use as washfast hydrophilic softeners for textiles)
- IT Fabric finishing agents
Fabric softeners
(production of polyquaternary ammonium polysiloxanes and their use as washfast hydrophilic softeners for textiles)
- IT Amines, uses
RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(tertiary, reaction products, ionene-type, with epoxide-terminated polydimethylsiloxane and ditertiary amines; production of polyquaternary ammonium polysiloxanes and their use as washfast hydrophilic softeners for textiles)
- IT 75-50-3DP, Trimethylamine, ionene reaction products with epoxide-terminated polydimethylsiloxane and tetramethylhexanediamine, salts with dodecanoic acid 112-18-5DP
, ionene reaction products with epoxide-terminated polydimethylsiloxane and ditertiary amines 112-69-6DP,
Dimethylhexadecylamine, ionene reaction products with epoxide-terminated polydimethylsiloxane and ditertiary amines 112-75-4DP,
Dimethyltetradecylamine, ionene reaction products with epoxide-terminated polydimethylsiloxane and ditertiary amines 124-28-7DP,
Dimethyloctadecylamine, ionene reaction products with epoxide-terminated polydimethylsiloxane and ditertiary amines 598-56-1DP,
ionene reaction products with epoxide-terminated polydimethylsiloxane and ditertiary amines 926-63-6DP,
Dimethylpropylamine, ionene reaction products with epoxide-terminated polydimethylsiloxane and ditertiary amines 927-62-8DP,
ionene reaction products with epoxide-terminated polydimethylsiloxane and ditertiary amines 1120-24-7DP
, Dimethyldecylamine, ionene reaction products with epoxide-terminated polydimethylsiloxane and ditertiary amines 4385-04-0DP
, ionene reaction products with epoxide-terminated polydimethylsiloxane and ditertiary amines 7378-99-6DP
, Dimethyloctylamine, ionene reaction products with epoxide-terminated

polydimethylsiloxane and ditertiary amines

RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)

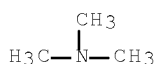
(production of polyquaternary ammonium

polysiloxanes and their use as washfast hydrophilic softeners for textiles)

IT 75-50-3DP, Trimethylamine, ionene reaction products with epoxide-terminated polydimethylsiloxane and tetramethylhexanediamine, salts with dodecanoic acid 112-18-5DP, ionene reaction products with epoxide-terminated polydimethylsiloxane and ditertiary amines 112-69-6DP, Dimethylhexadecylamine, ionene reaction products with epoxide-terminated polydimethylsiloxane and ditertiary amines 112-75-4DP, Dimethyltetradecylamine, ionene reaction products with epoxide-terminated polydimethylsiloxane and ditertiary amines 124-28-7DP, Dimethyloctadecylamine, ionene reaction products with epoxide-terminated polydimethylsiloxane and ditertiary amines 598-56-1DP, ionene reaction products with epoxide-terminated polydimethylsiloxane and ditertiary amines 926-63-6DP, Dimethylpropylamine, ionene reaction products with epoxide-terminated polydimethylsiloxane and ditertiary amines 927-62-8DP, ionene reaction products with epoxide-terminated polydimethylsiloxane and ditertiary amines 1120-24-7DP, Dimethyldecylamine, ionene reaction products with epoxide-terminated polydimethylsiloxane and ditertiary amines 4385-04-0DP, ionene reaction products with epoxide-terminated polydimethylsiloxane and ditertiary amines 7378-99-6DP, Dimethyloctylamine, ionene reaction products with epoxide-terminated polydimethylsiloxane and ditertiary amines
RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(production of polyquaternary ammonium polysiloxanes and their use as washfast hydrophilic softeners for textiles)

RN 75-50-3 HCAPLUS

CN Methanamine, N,N-dimethyl- (CA INDEX NAME)



RN 112-18-5 HCAPLUS

CN 1-Dodecanamine, N,N-dimethyl- (CA INDEX NAME)

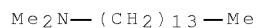


RN 112-69-6 HCAPLUS

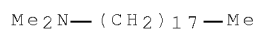
CN 1-Hexadecanamine, N,N-dimethyl- (CA INDEX NAME)



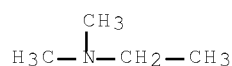
RN 112-75-4 HCAPLUS
 CN 1-Tetradecanamine, N,N-dimethyl- (CA INDEX NAME)



RN 124-28-7 HCAPLUS
 CN 1-Octadecanamine, N,N-dimethyl- (CA INDEX NAME)



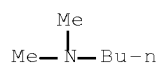
RN 598-56-1 HCAPLUS
 CN Ethanamine, N,N-dimethyl- (CA INDEX NAME)



RN 926-63-6 HCAPLUS
 CN 1-Propanamine, N,N-dimethyl- (CA INDEX NAME)



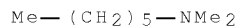
RN 927-62-8 HCAPLUS
 CN 1-Butanamine, N,N-dimethyl- (CA INDEX NAME)



RN 1120-24-7 HCAPLUS
 CN 1-Decanamine, N,N-dimethyl- (CA INDEX NAME)



RN 4385-04-0 HCAPLUS
 CN 1-Hexanamine, N,N-dimethyl- (CA INDEX NAME)



RN 7378-99-6 HCAPLUS
 CN 1-Octanamine, N,N-dimethyl- (CA INDEX NAME)

Me₂N—(CH₂)₇—Me

OSC.G 3 THERE ARE 3 CAPLUS RECORDS THAT CITE THIS RECORD (3 CITINGS)
 RE.CNT 8 THERE ARE 8 CITED REFERENCES AVAILABLE FOR THIS RECORD
 ALL CITATIONS AVAILABLE IN THE RE FORMAT

L80 ANSWER 12 OF 23 HCAPLUS COPYRIGHT 2009 ACS on STN

AN 2002:107429 HCAPLUS Full-text

DN 136:153122

TI Polyammonium-polysiloxane compounds, methods for the production
 and use thereof

IN Lange, Horst; Wagner, Roland; Witossek, Anita; Stachulla,
 Karl-Heinz; Teuber, Siegfried; Kropfgans, Martin; Sockel,
 Karl-Heinz; Moeller, Annette

PA GE Bayer Silicones GmbH & Co. KG, Germany

SO PCT Int. Appl., 116 pp.

CODEN: PIXXD2

DT Patent

LA German

FAN.CNT 1

| | PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|------|---|------|----------|-----------------|--------------|
| PI | WO 2002010257 | A1 | 20020207 | WO 2001-EP8699 | 20010727 <-- |
| | W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, | | | | |
| | CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, | | | | |
| | GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, | | | | |
| | LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, | | | | |
| | RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, | | | | |
| | UZ, VN, YU, ZA, ZW | | | | |
| | RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, | | | | |
| | DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, | | | | |
| | BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG | | | | |
| | AU 2001091687 | A | 20020213 | AU 2001-91687 | 20010727 <-- |
| | CA 2423285 | A1 | 20030324 | CA 2001-2423285 | 20010727 <-- |
| | EP 1309649 | A1 | 20030514 | EP 2001-971792 | 20010727 <-- |
| | EP 1309649 | B1 | 20040707 | | |
| | R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, | | | | |
| | IE, SI, LT, LV, FI, RO, MK, CY, AL, TR | | | | |
| | JP 2004505145 | T | 20040219 | JP 2002-515984 | 20010727 <-- |
| | AT 270685 | T | 20040715 | AT 2001-971792 | 20010727 <-- |
| | ES 2227271 | T3 | 20050401 | ES 2001-971792 | 20010727 <-- |
| | MX 2003000808 | A | 20030910 | MX 2003-808 | 20030127 <-- |
| | IN 2003MN00116 | A | 20050204 | IN 2003-MN116 | 20030127 <-- |
| | US 20040048996 | A1 | 20040311 | US 2003-333729 | 20030722 <-- |
| | US 7217777 | B2 | 20070515 | | |
| PRAI | DE 2000-10036530 | A | 20000727 | <-- | |
| | DE 2000-10036541 | A | 20000727 | <-- | |
| | DE 2000-10036542 | A | 20000727 | <-- | |
| | DE 2000-10036543 | A | 20000727 | <-- | |
| | WO 2001-EP8699 | W | 20010727 | <-- | |

ASSIGNMENT HISTORY FOR US PATENT AVAILABLE IN LSUS DISPLAY FORMAT

AB Polymers, useful for cosmetics, polishes, surface drying agent, and fabric
 finishing agents, and fabric softeners in laundering, contain (a) ≥1

polyoxyalkylene unit, (b) ≥ 1 di- or trivalent organic group having ≥ 1 ammonium substituent, (c) ≥ 1 polysiloxane unit terminated by di- or trivalent cyclic or branched C2-40 hydrocarbon optionally substituted by OH groups and bridged by amine, C:O, C:S, or ammonium groups, and (d) ≥ 1 (in)organic acid residue for neutralization of the ammonium group(s). A typical polymer was manufactured by reaction of polyethylene glycol monoallyl ether (d.p. 8) with ClCH_2COCl at 120° , reaction of the intermediate 8 h with dimethylsilyl-terminated polydimethylsiloxane in the presence of hexachloroplatinic acid at 130° , and quaternization of the 2nd intermediate 6 h at 90° with N,N'-dimethylpiperazine.

- IC ICM C08G0077-46
- ICS A61K0007-48; D06M0015-647; C08G0077-54
- CC 46-5 (Surface Active Agents and Detergents)
- Section cross-reference(s): 40, 42, 62
- ST polyammonium polysiloxane polyoxyalkylene cosmetic;
textile finishing agent polyammonium polysiloxane
polyoxyalkylene; fabric softener polyammonium polysiloxane
polyoxyalkylene; drying agent surface polyammonium
polysiloxane polyoxyalkylene; polish polyammonium
polysiloxane polyoxyalkylene
- IT Polysiloxanes, uses
RL: COS (Cosmetic use); IMF (Industrial manufacture); TEM (Technical or
engineered material use); BIOL (Biological study); PREP (Preparation);
USES (Uses)
(ionene-polyoxyalkylene-, block; polyoxyalkylene
polyammonium polysiloxane compds. for fabric softeners
combined with detergents in laundering)
- IT Polyoxyalkylenes, uses
RL: COS (Cosmetic use); IMF (Industrial manufacture); TEM (Technical or
engineered material use); BIOL (Biological study); PREP (Preparation);
USES (Uses)
(ionene-polysiloxane-, block; polyoxyalkylene
polyammonium polysiloxane compds. for fabric softeners
combined with detergents in laundering)
- IT Quaternary ammonium compounds, uses
RL: COS (Cosmetic use); IMF (Industrial manufacture); TEM (Technical or
engineered material use); BIOL (Biological study); PREP (Preparation);
USES (Uses)
(polymers; polyoxyalkylene polyammonium polysiloxane
compds. for fabric softeners combined with detergents in laundering)
- IT Cosmetics
(polyoxyalkylene polyammonium polysiloxane compds.
for cosmetics)
- IT Drying agents
(polyoxyalkylene polyammonium polysiloxane compds.
for drying agents)
- IT Fabric softeners
Laundering
(polyoxyalkylene polyammonium polysiloxane compds.
for fabric softeners combined with detergents in laundering)
- IT Polishing materials
(polyoxyalkylene polyammonium polysiloxane compds.
for polishes)
- IT Fabric finishing agents
(polyoxyalkylene polyammonium polysiloxane compds.
for textile finishing agents)
- IT Polysiloxanes, uses
RL: COS (Cosmetic use); IMF (Industrial manufacture); TEM (Technical or
engineered material use); BIOL (Biological study); PREP (Preparation);

USES (Uses)

(polyoxyalkylene-, block, quaternary ammonium derivs.; polyoxyalkylene polyammonium polysiloxane compds. for fabric softeners combined with detergents in laundering)

IT Ionene polymers

RL: COS (Cosmetic use); IMF (Industrial manufacture); TEM (Technical or engineered material use); BIOL (Biological study); PREP (Preparation); USES (Uses)

(polyoxyalkylene-polysiloxane-, block; polyoxyalkylene polyammonium polysiloxane compds. for fabric softeners combined with detergents in laundering)

IT Polyoxyalkylenes, uses

RL: COS (Cosmetic use); IMF (Industrial manufacture); TEM (Technical or engineered material use); BIOL (Biological study); PREP (Preparation); USES (Uses)

(polysiloxane-, block, quaternary ammonium derivs.; polyoxyalkylene polyammonium polysiloxane compds. for fabric softeners combined with detergents in laundering)

IT 106-58-1DP, N,N'-Dimethylpiperazine, ionene derivs. with adducts of polyethylene glycol monoallyl ether chloroacetate and dimethylsilyl-terminated polydimethylsiloxane

109-01-3DP, N-Methylpiperazine, reaction products with epoxy-terminated polydimethylsiloxane, salts with triethylene glycol monomethyl ether chloroacetate 110-85-0DP, Piperazine, reaction products with epoxy-terminated polydimethylsiloxane, salts with triethylene glycol monomethyl ether chloroacetate 31900-57-9DP, Dimethylsilanediol homopolymer, dimethylsilyl-terminated, reaction products with polyethylene glycol monoallyl ether chloroacetate, ionene derivs. 56867-89-1DP, ionene derivs. with adducts of methylpiperazine and epoxy-terminated polydimethylsiloxane 90948-78-0DP, salts with adducts of methylpiperazine and epoxy-terminated polydimethylsiloxane 115254-29-0DP, Dimethylsilanediol homopolymer, sru dimethylsilyl-terminated, reaction products with polyethylene glycol monoallyl ether chloroacetate, ionene derivs. 130167-23-6DP, reaction products with methylpiperazine, salts with triethylene glycol monomethyl ether chloroacetate 395660-26-1DP, reaction products with dimethylsilyl-terminated polydimethylsiloxane, ionene derivs. 395660-27-2DP, ionene derivs. with adducts of polyethylene glycol monoallyl ether chloroacetate and dimethylsilyl-terminated polydimethylsiloxane

RL: COS (Cosmetic use); IMF (Industrial manufacture); TEM (Technical or engineered material use); BIOL (Biological study); PREP (Preparation); USES (Uses)

(polyoxyalkylene polyammonium polysiloxane compds. for fabric softeners combined with detergents in laundering)

IT 126-80-7P

RL: COS (Cosmetic use); IMF (Industrial manufacture); TEM (Technical or engineered material use); BIOL (Biological study); PREP (Preparation); USES (Uses)

(precursor; polyoxyalkylene polyammonium polysiloxane compds. for fabric softeners combined with detergents in laundering)

IT 109-01-3, N-Methylpiperazine 111-46-6, Diethylene glycol, reactions

RL: RCT (Reactant); RACT (Reactant or reagent)

(precursor; polyoxyalkylene polyammonium polysiloxane compds. for fabric softeners combined with detergents in laundering)

IT 106-58-1DP, N,N'-Dimethylpiperazine, ionene derivs. with adducts of polyethylene glycol monoallyl ether chloroacetate and

dimethylsilyl-terminated polydimethylsiloxane
 109-01-3DP, N-Methylpiperazine, reaction products with
 epoxy-terminated polydimethylsiloxane, salts with triethylene
 glycol monomethyl ether chloroacetate 110-85-0DP, Piperazine,
 reaction products with epoxy-terminated polydimethylsiloxane,
 salts with triethylene glycol monomethyl ether chloroacetate
 31900-57-9DP, Dimethylsilanediol homopolymer,
 dimethylsilyl-terminated, reaction products with polyethylene glycol
 monoallyl ether chloroacetate, ionene derivs. 115254-29-0DP,
 Dimethylsilanediol homopolymer, sru dimethylsilyl-terminated, reaction
 products with polyethylene glycol monoallyl ether chloroacetate, ionene
 derivs. 130167-23-6DP, reaction products with
 methylpiperazine, salts with triethylene glycol monomethyl ether
 chloroacetate

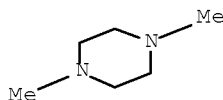
RL: COS (Cosmetic use); IMF (Industrial manufacture); TEM (Technical or
 engineered material use); BIOL (Biological study); PREP (Preparation);
 USES (Uses)

(polyoxyalkylene polyammonium polysiloxane compds.

for fabric softeners combined with detergents in laundering)

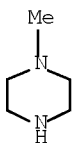
RN 106-58-1 HCAPLUS

CN Piperazine, 1,4-dimethyl- (CA INDEX NAME)



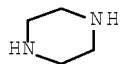
RN 109-01-3 HCAPLUS

CN Piperazine, 1-methyl- (CA INDEX NAME)



RN 110-85-0 HCAPLUS

CN Piperazine (CA INDEX NAME)



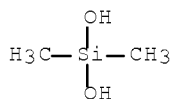
RN 31900-57-9 HCAPLUS

CN Silanediol, 1,1-dimethyl-, homopolymer (CA INDEX NAME)

CM 1

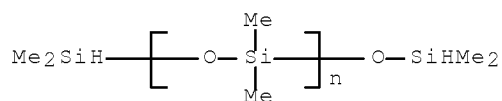
CRN 1066-42-8

CMF C2 H8 O2 Si



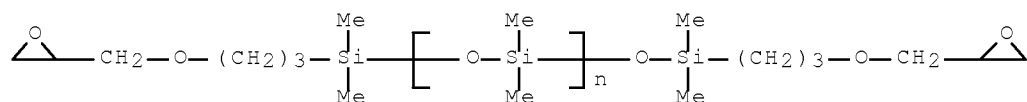
RN 115254-29-0 HCAPLUS

CN Poly[oxy(dimethylsilylene)], α -(dimethylsilyl)- ω -
[(dimethylsilyl)oxy]- (CA INDEX NAME)



RN 130167-23-6 HCAPLUS

CN Poly[oxy(dimethylsilylene)], α -[dimethyl[3-(2-oxiranylmethoxy)propyl]silyl]- ω -[[dimethyl[3-(2-oxiranylmethoxy)propyl]silyl]oxy]- (CA INDEX NAME)



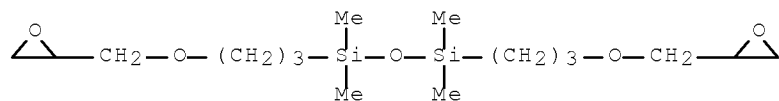
IT 126-80-7P

RL: COS (Cosmetic use); IMF (Industrial manufacture); TEM (Technical or engineered material use); BIOL (Biological study); PREP (Preparation); USES (Uses)

(precursor; polyoxyalkylene polyammonium polysiloxane
comps. for fabric softeners combined with detergents in laundering)

RN 126-80-7 HCAPLUS

CN Disiloxane, 1,1,3,3-tetramethyl-1,3-bis[3-(2-oxiranylmethoxy)propyl]- (CA INDEX NAME)



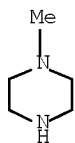
IT 109-01-3, N-Methylpiperazine

RL: RCT (Reactant); RACT (Reactant or reagent)

(precursor; polyoxyalkylene polyammonium polysiloxane
comps. for fabric softeners combined with detergents in laundering)

RN 109-01-3 HCAPLUS

CN Piperazine, 1-methyl- (CA INDEX NAME)



OSC.G 10 THERE ARE 10 CAPLUS RECORDS THAT CITE THIS RECORD (12 CITINGS)
 RE.CNT 6 THERE ARE 6 CITED REFERENCES AVAILABLE FOR THIS RECORD
 ALL CITATIONS AVAILABLE IN THE RE FORMAT

L80 ANSWER 13 OF 23 HCAPLUS COPYRIGHT 2009 ACS on STN

AN 2002:107428 HCAPLUS Full-text

DN 136:151978

TI Mono- or polyquaternary ammonium polysiloxanes

IN Lange, Horst; Wagner, Roland; Witossek, Anita; Stachulla, Karl-Heinz; Teuber, Siegfried; Kropfgans, Martin; Sockel, Karl-Heinz; Firstenberg, Don

PA GE Bayer Silicones GmbH & Co. KG, Germany

SO PCT Int. Appl., 48 pp.

CODEN: PIXXD2

DT Patent

LA German

FAN.CNT 1

| | PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|------|------------------|--|----------|-----------------|--------------|
| PI | WO 2002010256 | A1 | 20020207 | WO 2001-EP8698 | 20010727 <-- |
| | W: | AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW | | | |
| | RW: | GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG | | | |
| | AU 2001091686 | A | 20020213 | AU 2001-91686 | 20010727 <-- |
| | EP 1309648 | A1 | 20030514 | EP 2001-971791 | 20010727 <-- |
| | EP 1309648 | B1 | 20060920 | | |
| | R: | AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR | | | |
| | JP 2004521967 | T | 20040722 | JP 2002-515983 | 20010727 <-- |
| | AT 340210 | T | 20061015 | AT 2001-971791 | 20010727 <-- |
| | US 20090076238 | A1 | 20090319 | US 2008-333730 | 20081024 <-- |
| PRAI | DE 2000-10036524 | A | 20000727 | <-- | |
| | WO 2001-EP8698 | W | 20010727 | <-- | |

ASSIGNMENT HISTORY FOR US PATENT AVAILABLE IN LSUS DISPLAY FORMAT

AB The title compds., with specified structures, are useful in hair preps.
 Refluxing 0.1 mol 3-[3-(glycidyoxy)propyl]-1,1,1,3,5,5,5-heptamethyltrisiloxane with 0.1 mol N-methylpiperazine in iso-PrOH for 7 h gave a 1:1 adduct which was refluxed (50 mmol) with 50 mmol 3-(heptapropyltrisiloxane-3-yl)-2-propenyl chloroacetate in 2-pentanone for 6 h to give the 1:1 quaternary ammonium salt. Hair-care formulations of the products are listed.

IC ICM C08G0077-46

ICS A61K0007-48; D06M0015-647

CC 37-3 (Plastics Manufacture and Processing)

Section cross-reference(s): 62

- ST quaternary ammonium deriv polysiloxane; hair
care polysiloxane quaternary ammonium;
methyldipiperazine adduct glycidylpropyltrisiloxane;
trisiloxanylallyl chloroacetate quaternary salt; allyl
chloroacetate prep reaction
- IT Fibers
RL: MSC (Miscellaneous)
(preparation of siloxane quaternary ammonium
derivs. for finishing of textile fibers)
- IT Textiles
(preparation of siloxane quaternary ammonium
derivs. for finishing of textiles)
- IT Waterproofing agents
(preparation of siloxane quaternary ammonium
derivs. for use as waterproofing agents)
- IT Detergents
(preparation of siloxane quaternary ammonium
derivs. for use in detergents)
- IT Hair preparations
(preparation of siloxane quaternary ammonium
derivs. for use in hair care products)
- IT Surfactants
(preparation of siloxane quaternary ammonium
derivs. for use in surfactants)
- IT Skin
(preps.; preparation of siloxane quaternary
ammonium derivs. for use in skin care products)
- IT Polysiloxanes, preparation
RL: COS (Cosmetic use); IMF (Industrial manufacture); BIOL (Biological
study); PREP (Preparation); USES (Uses)
(quaternary ammonium derivs.; preparation for use in
hair care products)
- IT Quaternary ammonium compounds, preparation
RL: COS (Cosmetic use); IMF (Industrial manufacture); BIOL (Biological
study); PREP (Preparation); USES (Uses)
(siloxane derivs.; preparation for use in hair care products)
- IT 394220-50-9P
RL: IMF (Industrial manufacture); RCT (Reactant); PREP (Preparation); RACT
(Reactant or reagent)
(preparation and reaction with (heptamethyltrisiloxanyl)allyl
chloroacetate)
- IT 2916-14-5P, Allyl chloroacetate
RL: IMF (Industrial manufacture); RCT (Reactant); PREP (Preparation); RACT
(Reactant or reagent)
(preparation and reaction with heptamethyltrisiloxane)
- IT 106-78-5P, Diethylene glycol bis(chloroacetate) 394220-51-0P
RL: IMF (Industrial manufacture); RCT (Reactant); PREP (Preparation); RACT
(Reactant or reagent)
(preparation and reaction with trisiloxane piperazine derivs.)
- IT 106-92-3DP, Allyl glycidyl ether, reaction products with
hydrosiloxanes, quaternary ammonium derivs.
2878-14-0DP, Methallylamine, reaction products with
siloxane derivs., quaternary salts 26755-51-1DP, Propargyl
chloroacetate, reaction products with hydrosiloxanes,
quaternary ammonium derivs. 31900-57-9DP,
Dimethylsilanediol homopolymer, (glycidylpropyl) derivs., reaction
products with methyldipiperazine 40987-35-7DP, reaction products with
siloxane derivs., quaternary salts 52349-43-6DP,
Vinylcyclohexene oxide, reaction products with hydrosiloxanes,

quaternary ammonium derivs. 62886-12-8DP, Allyl
 3-chloropropionate, reaction products with hydrosiloxanes,
 quaternary ammonium derivs. 63128-00-7DP, reaction
 products with hydrosiloxanes, quaternary
 ammonium derivs. 394220-52-1P 394220-53-2P
 RL: COS (Cosmetic use); IMF (Industrial manufacture); BIOL (Biological
 study); PREP (Preparation); USES (Uses)

(preparation for use in hair care products)

IT 109-01-3, N-Methylpiperazine

RL: RCT (Reactant); RACT (Reactant or reagent)

(reaction with [(glycidyoxy)propyl]heptamethyltrisiloxane)

IT 1873-88-7, 1,1,1,3,5,5,5-Heptamethyltrisiloxane

RL: RCT (Reactant); PACT (Reactant or reagent)

(reaction with allyl chloroacetate)

IT 7422-52-8

RL: RCT (Reactant); RACT (Reactant or reagent)

(reaction with methylpiperazine)

IT 2878-14-0DP, Methallylamine, reaction products with

siloxane derivs., quaternary salts 31900-57-9DP,

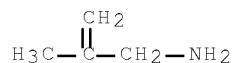
Dimethylsilanediol homopolymer, (glycidyoxy)propyl derivs., reaction
 products with methylpiperazine

RL: COS (Cosmetic use); IMF (Industrial manufacture); BIOL (Biological
 study); PREP (Preparation); USES (Uses)

(preparation for use in hair care products)

RN 2878-14-0 HCAPLUS

CN 2-Propen-1-amine, 2-methyl- (9CI) (CA INDEX NAME)



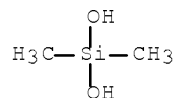
RN 31900-57-9 HCAPLUS

CN Silanediol, 1,1-dimethyl-, homopolymer (CA INDEX NAME)

CM 1

CRN 1066-42-8

CMF C2 H8 O2 Si



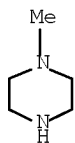
IT 109-01-3, N-Methylpiperazine

RL: RCT (Reactant); RACT (Reactant or reagent)

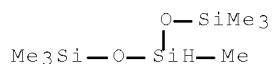
(reaction with [(glycidyoxy)propyl]heptamethyltrisiloxane)

RN 109-01-3 HCAPLUS

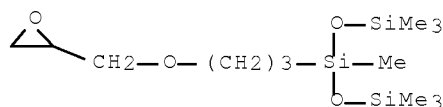
CN Piperazine, 1-methyl- (CA INDEX NAME)



IT 1873-88-7, 1,1,1,3,5,5,5-Heptamethyltrisiloxane
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (reaction with allyl chloroacetate)
 RN 1873-88-7 HCAPLUS
 CN Trisiloxane, 1,1,1,3,5,5,5-heptamethyl- (CA INDEX NAME)



IT 7422-52-8
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (reaction with methylpiperazine)
 RN 7422-52-8 HCAPLUS
 CN Trisiloxane, 1,1,1,3,5,5,5-heptamethyl-3-[3-(2-oxiranylmethoxy)propyl]-
 (CA INDEX NAME)



OSC.G 7 THERE ARE 7 CAPLUS RECORDS THAT CITE THIS RECORD (7 CITINGS)
 RE.CNT 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD
 ALL CITATIONS AVAILABLE IN THE RE FORMAT

L80 ANSWER 14 OF 23 HCAPLUS COPYRIGHT 2009 ACS on STN
 AN 2000:687986 HCAPLUS Full-text
 DN 133:267571
 TI Zwitterionic siloxane polymers and ionically cross-linked polymers formed therefrom
 IN Gormley, John L.; Berger, Abe; Fost, Dennis L.
 PA Mona Industries, Inc., USA
 SO U.S., 15 pp.
 CODEN: USXXAM
 DT Patent
 LA English
 FAN.CNT 1

| | PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|----|---------------|------|----------|-----------------|--------------|
| PI | US 6124490 | A | 20000926 | US 1999-427216 | 19991026 <-- |
| | CA 2387498 | A1 | 20010503 | CA 2000-2387498 | 20001026 <-- |
| | WO 2001030886 | A2 | 20010503 | WO 2000-US41558 | 20001026 <-- |
| | WO 2001030886 | A3 | 20010913 | | |

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR,

HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT,
 LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU,
 SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN,
 YU, ZA, ZW
 RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY,
 DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ,
 CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG
 BR 2000015226 A 20020716 BR 2000-15226 20001026 <--
 EP 1224239 A2 20020724 EP 2000-988510 20001026 <--
 EP 1224239 B1 20030521
 R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,
 IE, SI, LT, LV, FI, RO, MK, CY, AL
 TR 200201064 T2 20020923 TR 2002-1064 20001026 <--
 JP 2003513129 T 20030408 JP 2001-533881 20001026 <--
 AT 240989 T 20030615 AT 2000-988510 20001026 <--
 NZ 518366 A 20040130 NZ 2000-518366 20001026 <--
 ES 2199890 T3 20040301 ES 2000-988510 20001026 <--
 AU 774151 B2 20040617 AU 2001-24714 20001026 <--
 CN 1206281 C 20050615 CN 2000-814530 20001026 <--
 IL 149196 A 20070724 IL 2000-149196 20001026 <--
 MX 2002003918 A 20041206 MX 2002-3918 20020418 <--
 IN 2002CN00563 A 20070309 IN 2002-CN563 20020418 <--
 PRAI US 1999-427216 A 19991026 <--
 WO 2000-US41558 W 20001026 <--

ASSIGNMENT HISTORY FOR US PATENT AVAILABLE IN LSUS DISPLAY FORMAT

AB Ionically cross-linked silicone polymers of a thickened gel-like consistency are made by reacting a diamino containing polysiloxane with an acid containing reactant selected from itaconic acid or the ester derivative thereof; substituted or unsubstituted cyclic and anhydride; substituted or unsubstituted conjugated olefinic acid or mixts. of the same at an elevated temperature in the presence of a low mol. weight silicone oil or other solvent until an ionically cross-linked zwitterionic siloxane polymer of a gel-like consistency is formed.

IC ICM C07F0007-10

INCL 556425000

CC 37-3 (Plastics Manufacture and Processing)
 Section cross-reference(s): 62

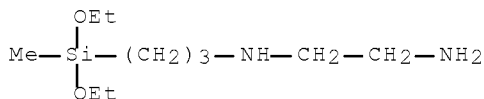
IT 79-10-7DP, Acrylic acid, reaction products with aminosiloxanes
 97-65-4DP, Itaconic acid, reaction products with aminosiloxanes
 25377-73-5DP, Dodecenyl succinic anhydride, reaction products with aminosiloxanes 28777-98-2DP, Octadecenyl succinic anhydride, reaction products with aminosiloxanes 297143-62-5DP,
 [(Aminoethyl)amino]propylmethyldiethoxysilane-dimethylsilanediol copolymer, reaction products with anhydrides or acids
 RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
 (zwitterionic siloxane polymers and ionically cross-linked polymers formed therefrom)

IT 297143-62-5DP, [(Aminoethyl)amino]propylmethyldiethoxysilane-dimethylsilanediol copolymer, reaction products with anhydrides or acids
 RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
 (zwitterionic siloxane polymers and ionically cross-linked polymers formed therefrom)

RN 297143-62-5 HCAPLUS

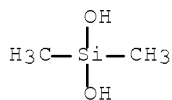
CN Silanediol, dimethyl-, polymer with
 N-[3-(diethoxymethylsilyl)propyl]-1,2-ethanediamine (9CI) (CA INDEX NAME)

CRN 70240-34-5
 CMF C10 H26 N2 O2 Si



CM 2

CRN 1066-42-8
 CMF C2 H8 O2 Si



OSC.G 4 THERE ARE 4 CAPLUS RECORDS THAT CITE THIS RECORD (4 CITINGS)
 RE.CNT 15 THERE ARE 15 CITED REFERENCES AVAILABLE FOR THIS RECORD
 ALL CITATIONS AVAILABLE IN THE RE FORMAT

L80 ANSWER 15 OF 23 HCAPLUS COPYRIGHT 2009 ACS on STN
 AN 1999:135320 HCAPLUS Full-text
 DN 130:342735
 TI Synergy between silicones and quaternary compounds for clear and mild conditioning shampoos
 AU Marchioretto, Sabrina; Blakely, Janet
 CS Personal Care Europe, Dow Corning, Brussels, Belg.
 SO Pollena: Tluszcz, Srodki Piorace, Kosmetyki (1998), 42(8), 303-312
 CODEN: PTKDF; ISSN: 0208-8711
 PB Bointe Centre
 DT Journal; General Review
 LA Polish
 AB A study of ingredients used in hair products showed that silicones are used in 79% of 2-in-1 shampoos and 33% of normal shampoos (USA News Cosmetic Research 1996, Dow Corning internal anal., unpublished results), indicating that silicones are helping to achieve the desired product attributes. Silicones exist as a wide range of versatile polymers. A review with 26 refs. By varying their functionalities and/or mol. wts., they can act as light conditioning additives for healthy hair or as strong conditioning agents for damaged hair. The aim of this paper is to demonstrate the unique synergistic effect on hair conditioning of a class of silicones called the Silicone Polyethers, when combined with quaternary polymers. In addition, the flexibility of this range of silicones in meeting addnl. desirable benefits such as a mildness and foam boosting, and in formulating crystal-clear shampoos will be demonstrated. As shown in this paper, Dow Corning does not only provides silicones for specific applications but also suitable data to allow the substantiation of claims, as required by the 6th Amendment (European Cosmetic Directive No 76/768/EEC). To facilitate this, various test methods

have been developed inhouse to measure attributes such as foam quality, ease of wet combining, antistatic, behavior and feel of hair.

CC 62-0 (Essential Oils and Cosmetics)

ST review shampoo quaternary compd synergy silicone

IT Shampoos

(conditioning; synergy between silicones and quaternary compds. for clear and mild conditioning shampoos)

IT Polysiloxanes, biological studies

Polysiloxanes, biological studies

RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); BUU (Biological use, unclassified); PEP (Physical, engineering or chemical process); PRP (Properties); BIOL (Biological study); PROC (Process); USES (Uses)

(polyether-; synergy between silicones and quaternary compds. for clear and mild conditioning shampoos)

IT Polyethers, biological studies

Polyethers, biological studies

RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); BUU (Biological use, unclassified); PEP (Physical, engineering or chemical process); PRP (Properties); BIOL (Biological study); PROC (Process); USES (Uses)

(siloxane-; synergy between silicones and quaternary compds. for clear and mild conditioning shampoos)

IT Quaternary ammonium compounds, biological studies

RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); BUU (Biological use, unclassified); PEP (Physical, engineering or chemical process); PRP (Properties); BIOL (Biological study); PROC (Process); USES (Uses)

(synergy between silicones and quaternary compds. for clear and mild conditioning shampoos)

L80 ANSWER 16 OF 23 HCAPLUS COPYRIGHT 2009 ACS on STN

AN 1993:479819 HCAPLUS Full-text

DN 119:79819

OREF 119:14183a,14186a

TI Hair cosmetics containing quaternary ammonium salts and/or amine salts and silicones

IN Horinishi, Nobutaka; Yahagi, Kazuyuki

PA Kao Corp, Japan

SO Jpn. Kokai Tokkyo Koho, 15 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 1

| | PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|------|----------------|------|----------|-----------------|--------------|
| PI | JP 05070327 | A | 19930323 | JP 1991-230253 | 19910910 <-- |
| | JP 3043481 | B2 | 20000522 | | |
| PRAI | JP 1991-230253 | | 19910910 | <-- | |

OS MARPAT 119:79819

AB Hair cosmetics contain [R1NR2R3R4]+X- (R1 = straight-chain saturated or branched C8-28 alkyl; R2 = C8-22 alkyl or alkenyl; R3, R4 = C1-4 alkyl, H; R3 = R4 ≠ H; X = halo, C1-4 alkyl sulfate) and silicones chosen from di-Me polysiloxane, Me Ph polysiloxane, amino-modified silicone, fatty acid-modified polysiloxane, alc.-modified silicone, aliphatic alc.-modified polysiloxane, polyether -modified silicone, epoxy-modified silicone, F-modified silicone, cyclosilicone, and alkyl-modified silicone. The cosmetics show hair-smoothing and -softening effects. Fine Oxocol 180N [2-(3-methylhexyl)-7-methyl-1-decanol] was treated with Cu-Zn-Ru catalyst (preparation given) and MeNH2 gas at 190° to give 93% N-[2-(3-methylhexyl)-7-methyl-1-decyl]-N-methylamine,

which was treated similarly with Kalcohol 20 (n-dodecyl alc.) for .apprx.6 h to give 90% N-[2-(3-methylhexyl)-7-methyl-1-decyl]-N-dodecyl-N-methylamine (I). I, iso-Pr alc., Na2CO3, H2O, and MeCl were kept at 100° for .apprx.8 h to give 71% N-[2-(3-methylhexyl)-7-methyl-1-decyl]-N-dodecyl-N,N- dimethylammonium chloride (II). Hair rinse composition containing II, stearyltrimethylammonium chloride, polyether-modified silicone, cetyl alc., propylene glycol, and H2O was formulated.

- IC ICM A61K0007-06
- CC 62-3 (Essential Oils and Cosmetics)
- ST hair quaternary ammonium amine silicone
- IT Cyclosiloxanes
 - RL: BIOL (Biological study)
 - (hair cosmetics containing quaternary ammonium salts and/or amine salts and)
- IT Quaternary ammonium compounds, biological studies
 - RL: BIOL (Biological study)
 - (hair cosmetics containing silicones and)
- IT Siloxanes and Silicones, biological studies
 - RL: BIOL (Biological study)
 - (Me Ph, hair cosmetics containing quaternary ammonium salts and/or amine salts and)
- IT Siloxanes and Silicones, biological studies
 - RL: BIOL (Biological study)
 - (alkyl, hair cosmetics containing quaternary ammonium salts and/or amine salts and)
- IT Alcohols, compounds
 - Fatty acids, compounds
 - RL: BIOL (Biological study)
 - (compds., siloxanes modified with, hair cosmetics containing quaternary ammonium salts and/or amine salts and)
- IT Hair preparations
 - (conditioners, containing quaternary ammonium salts and/or amine salts and silicones)
- IT Siloxanes and Silicones, biological studies
 - RL: BIOL (Biological study)
 - (di-Me, hair cosmetics containing quaternary ammonium salts and/or amine salts and)
- IT Siloxanes and Silicones, biological studies
 - RL: BIOL (Biological study)
 - (epoxy, hair cosmetics containing quaternary ammonium salts and/or amine salts and)
- IT Siloxanes and Silicones, biological studies
 - RL: BIOL (Biological study)
 - (fluoro, hair cosmetics containing quaternary ammonium salts and/or amine salts and)
- IT Siloxanes and Silicones, biological studies
 - RL: BIOL (Biological study)
 - (polyether-, hair cosmetics containing quaternary ammonium salts and/or amine salts and)
- IT Epoxy resins, biological studies
 - RL: BIOL (Biological study)
 - (siloxane-, hair cosmetics containing quaternary ammonium salts and/or amine salts and)
- IT 147553-62-6
 - RL: BIOL (Biological study)
 - (hair cosmetics containing silicones and)
- IT 145412-26-6P
 - RL: SPN (Synthetic preparation); PREP (Preparation)
 - (preparation and condensation of, with dodecyl alc.)
- IT 149098-41-9P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

(preparation and reaction of, with Me chloride)

IT 146064-62-2P

RL: PREP (Preparation)

(preparation of, hair cosmetics containing silicones and)

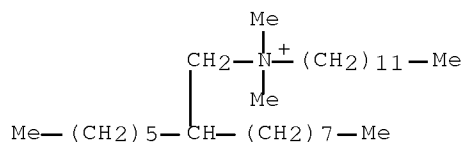
IT 147553-62-6

RL: BIOL (Biological study)

(hair cosmetics containing silicones and)

RN 147553-62-6 HCAPLUS

CN 1-Dodecanaminium, N-(2-hexyldecyl)-N,N-dimethyl-, chloride (1:1) (CA INDEX NAME)



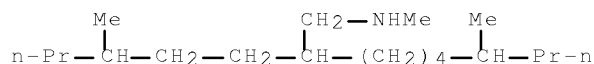
IT 145412-26-6P

RL: SPN (Synthetic preparation); PREP (Preparation)

(preparation and condensation of, with dodecyl alc.)

RN 145412-26-6 HCAPLUS

CN 1-Decanamine, N,7-dimethyl-2-(3-methylhexyl)- (CA INDEX NAME)



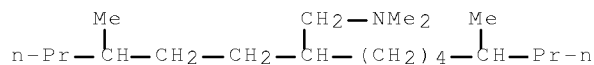
IT 149098-41-9P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

(preparation and reaction of, with Me chloride)

RN 149098-41-9 HCAPLUS

CN 1-Decanamine, N,N,7-trimethyl-2-(3-methylhexyl)- (CA INDEX NAME)



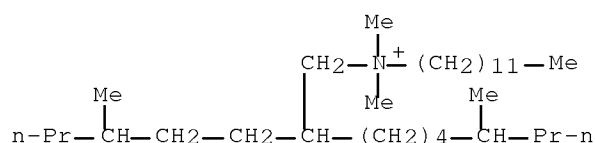
IT 146064-62-2P

RL: PREP (Preparation)

(preparation of, hair cosmetics containing silicones and)

RN 146064-62-2 HCAPLUS

CN 1-Dodecanaminium, N,N-dimethyl-N-[7-methyl-2-(3-methylhexyl)decyl]-, chloride (1:1) (CA INDEX NAME)



L80 ANSWER 17 OF 23 HCAPLUS COPYRIGHT 2009 ACS on STN

AN 1993:479815 HCAPLUS Full-text

DN 119:79815

OREF 119:14179a,14182a

TI Hair preparations containing cationic surfactants

IN Yahagi, Kazuyuki; Tashiro, Kazuhiro; Koyama, Takashi; Eshita, Yoshiyuki;
Ohtomo, Tsuyoshi; Sazanami, Fumiko; Kamegai, Jun

PA Kao Corp., Japan

SO Eur. Pat. Appl., 36 pp.

CODEN: EPXXDW

DT Patent

LA English

FAN.CNT 1

| | PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|------|----------------|------|----------|-----------------|--------------|
| PI | EP 538762 | A1 | 19930428 | EP 1992-117828 | 19921019 <-- |
| | EP 538762 | B1 | 19960410 | | |
| | R: DE, FR, GB | | | | |
| | JP 05112435 | A | 19930507 | JP 1991-274007 | 19911022 <-- |
| | JP 05221833 | A | 19930831 | JP 1992-25357 | 19920212 <-- |
| | US 5714136 | A | 19980203 | US 1995-384802 | 19950206 <-- |
| PRAI | JP 1991-274007 | A | 19911022 | <-- | |
| | JP 1992-25357 | A | 19920212 | <-- | |
| | US 1992-962921 | B1 | 19921019 | <-- | |
| | US 1994-208188 | B1 | 19940310 | <-- | |

ASSIGNMENT HISTORY FOR US PATENT AVAILABLE IN LSUS DISPLAY FORMAT

AB Hair preps. containing a cationic surfactant, a fat and/or an oil, and an alkyl saccharide surfactant give a good smoothness and an oil-free feel to the hair. For example, a hair rinse contained stearyltrimethylammonium chloride 1, cetostearyl alc. 4, C12-alkyl saccharide 0.4, propylene glycol 3%, and water balance.

IC ICM A61K0007-08

ICS A61K0007-06

CC 62-3 (Essential Oils and Cosmetics)

IT Oligosaccharides

RL: PREP (Preparation)

(alkyl ethers, hair preps. containing quaternary ammonium compds. and, conditioning)

IT Fats and Glyceridic oils

Lanolin

Paraffin oils

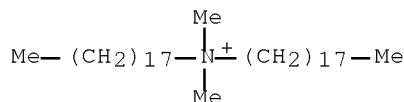
RL: BIOL (Biological study)

(hair preps. containing quaternary ammonium compds. and alkyl saccharides and, conditioning)

IT Hair preparations

(quaternary ammonium compds. and fats and alkyl saccharides in)

- IT Alcohols, biological studies
RL: BIOL (Biological study)
(C16-18, hair preps. containing quaternary ammonium compds. and alkyl saccharides and, conditioning)
- IT Quaternary ammonium compounds, biological studies
RL: BIOL (Biological study)
(C16-18-alkyltrimethyl, chlorides, hair preps. containing, conditioning)
- IT Siloxanes and Silicones, biological studies
RL: PREP (Preparation)
(**amino-containing**, hair preps. containing quaternary ammonium compds. and alkyl saccharides and, conditioning)
- IT Siloxanes and Silicones, biological studies
RL: PREP (Preparation)
(di-Me, hair preps. containing quaternary ammonium compds. and alkyl saccharides and, conditioning)
- IT Siloxanes and Silicones, biological studies
RL: PREP (Preparation)
(polyether-, hair preps. containing quaternary ammonium compds. and alkyl saccharides and, conditioning)
- IT 57-55-6, Propylene glycol, biological studies 111-01-3, Squalane
112-72-1, Myristyl alcohol 112-92-5, Stearyl alcohol 5333-42-6,
2-Octyldodecanol 25496-72-4, Oleic acid monoglyceride 26657-96-5,
Palmitic acid monoglyceride 30399-84-9, Isostearic acid 36653-82-4,
Cetanol 87244-72-2, SH 3775C 143711-48-2, SM8702C
RL: BIOL (Biological study)
(hair preps. containing quaternary ammonium compds. and alkyl saccharides and, conditioning)
- IT 107-64-2, Distearyltrimethylammonium chloride 112-03-8
, Stearyltrimethylammonium chloride 1812-53-9,
Dicetyltrimethylammonium chloride 17301-53-0,
Behenyltrimethylammonium chloride 62281-01-0
103807-16-5, 2-Hexyldodecyltrimethylammonium chloride
103807-18-7, 2-Dodecylhexadecyltrimethylammonium chloride
RL: BIOL (Biological study)
(hair preps. containing, conditioning)
- IT 107-64-2, Distearyltrimethylammonium chloride 112-03-8
, Stearyltrimethylammonium chloride 1812-53-9,
Dicetyltrimethylammonium chloride 17301-53-0,
Behenyltrimethylammonium chloride 62281-01-0
103807-16-5, 2-Hexyldodecyltrimethylammonium chloride
103807-18-7, 2-Dodecylhexadecyltrimethylammonium chloride
RL: BIOL (Biological study)
(hair preps. containing, conditioning)
- RN 107-64-2 HCAPLUS
- CN 1-Octadecanaminium, N,N-dimethyl-N-octadecyl-, chloride (1:1) (CA INDEX NAME)

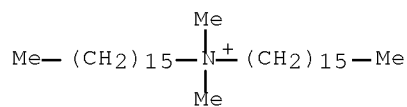


● c1-

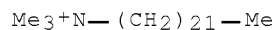
RN 112-03-8 HCAPLUS

$$\text{Me}_3^+\text{N}-(\text{CH}_2)_{17}-\text{Me}$$

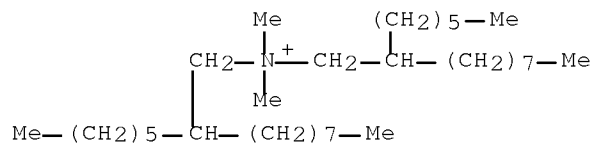

CN 1-Hexadecanaminium, N-hexadecyl-N,N-dimethyl-, chloride (1:1) (CA INDEX NAME)



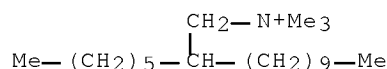
CN 1-Docosanaminium, N,N,N-trimethyl-, chloride (1:1) (CA INDEX NAME)



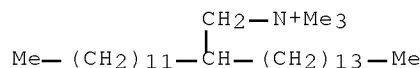
CN 1-Decanaminiun, 2-hexyl-N-(2-hexyldecyl)-N,N-dimethyl-, chloride (1:1)
(CA INDEX NAME)



| | |
|----|--|
| CN | 1-Dodecanaminium, 2-hexyl-N,N,N-trimethyl-, chloride (1:1) (CA INDEX NAME) |
|----|--|



RN 103807-18-7 HCAPLUS
 CN 1-Hexadecanaminium, 2-dodecyl-N,N,N-trimethyl-, chloride (1:1) (CA INDEX NAME)



OSC.G 6 THERE ARE 6 CAPLUS RECORDS THAT CITE THIS RECORD (6 CITINGS)

L80 ANSWER 18 OF 23 HCAPLUS COPYRIGHT 2009 ACS on STN

AN 1993:434091 HCAPLUS Full-text

DN 119:34091

OREF 119:6143a,6146a

TI Hair rinse compositions containing quaternary ammonium salts, silicones, and polyethers

IN Ooshima, Tatsuo

PA Kanebo Ltd, Japan

SO Jpn. Kokai Tokkyo Koho, 6 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 1

| | PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|------|----------------|------|----------|-----------------|--------------|
| PI | JP 05058856 | A | 19930309 | JP 1991-244419 | 19910828 <-- |
| | JP 2960587 | B2 | 19991006 | | |
| PRAI | JP 1991-244419 | | 19910828 | <-- | |

OS MARPAT 119:34091

AB Hair rinse compns. with good conditioning effect contain (1) [R1NR2R3R4]+ X- (1 or 2 of R1-R4 = C12-24 alkyl, and the others = C1-3 alkyl, PhCH2; X = halo) 0.3-5, (2) R6R52SiO[SiR52O]nSiR52R7 [R5 = Me, Ph (≥90% R5 = Me); R6, R7 = Me, OH; R6 = R7 ≠ OH] 1-6, and (3) diglycerin-propylene oxide (5-15 mol) adduct 0.1-3 weight%. Octadecyltrimethylammonium chloride 1.0, di-Me siloxane 1.0, polyether-modified silicone 1.0, hexadecyl alc. 2.5, liquid paraffin 0.5, glycerin mono-octadecanoate 1.5, propylene glycol 5.0, and H2O to 100 weight% were mixed to give a hair rinse.

IC ICM A61K0007-08

CC 62-3 (Essential Oils and Cosmetics)

ST hair rinse quaternary ammonium silicone

IT Siloxanes and Silicones, biological studies

RL: BIOL (Biological study)

(hair rinses containing quaternary ammonium salts and diglycerin polyoxypropylene ether and)

IT Quaternary ammonium compounds, biological studies

RL: BIOL (Biological study)

(hair rinses containing silicones and diglycerin polyoxypropylene ether and)

IT Hair preparations

(rinses, containing quaternary ammonium salts and silicones and diglycerin polyoxypropylene ether)

IT 61710-63-2, Diglycerin polyoxypropylene ether

RL: BIOL (Biological study)

(hair rinses containing quaternary ammonium salts and silicones and)

IT 107-64-2, Dimethyldioctadecylammonium chloride

112-03-8, Octadecyltrimethylammonium chloride 17301-53-0

, Docosyltrimethylammonium chloride

RL: BIOL (Biological study)

(hair rinses containing silicones and diglycerin polyoxypropylene ether and)

IT 107-64-2, Dimethyldioctadecylammonium chloride

112-03-8, Octadecyltrimethylammonium chloride 17301-53-0

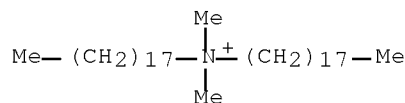
, Docosyltrimethylammonium chloride

RL: BIOL (Biological study)

(hair rinses containing silicones and diglycerin polyoxypropylene ether and)

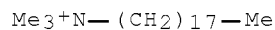
RN 107-64-2 HCAPLUS

CN 1-Octadecanaminium, N,N-dimethyl-N-octadecyl-, chloride (1:1) (CA INDEX NAME)



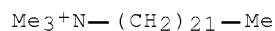
RN 112-03-8 HCAPLUS

CN 1-Octadecanaminium, N,N,N-trimethyl-, chloride (1:1) (CA INDEX NAME)



RN 17301-53-0 HCAPLUS

CN 1-Docosanaminium, N,N,N-trimethyl-, chloride (1:1) (CA INDEX NAME)



L80 ANSWER 19 OF 23 HCAPLUS COPYRIGHT 2009 ACS on STN
 AN 1993:434086 HCAPLUS Full-text
 DN 119:34086
 OREF 119:6143a,6146a

TI Shampoo compositions containing quaternary ammonium salts and silicones

IN Matsuo, Takashi; Yahagi, Kazuyuki

PA Kao Corp, Japan

SO Jpn. Kokai Tokkyo Koho, 11 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 1

| | PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|------|------------------|------|----------|-----------------|--------------|
| PI | JP 05043433 | A | 19930223 | JP 1991-199018 | 19910808 <-- |
| PRAI | JP 1991-199018 | | 19910808 | <-- | |
| OS | MARPAT 119:34086 | | | | |

AB Shampoo compns. which are not irritating to the skin and show good foaming and conditioning properties, contain (i) quaternary ammonium salts having secondary or tertiary amino group and aliphatic chain (and ether, ester, or acyl group) and (ii) silicones. C13H27CONH(CH2)2N(CH2CH2OH)CH2CH(OH)CH2N+Me3 Cl- 15, 2-dodecylhexadecyltrimethylammonium chloride 1, polyoxyethylene lauryl glucoside 5, KF 96 (di-Me siloxane) 0.5, xanthan gum 0.3, Na benzoate 0.3, perfume, colorant, and H2O to 100 weight% were mixed to give a shampoo.

IC ICM A61K0007-075

CC 62-3 (Essential Oils and Cosmetics)

ST shampoo quaternary ammonium salt silicone

IT Shampoos

(quaternary ammonium salts and silicones in, with good conditioning effect)

IT Quaternary ammonium compounds, biological studies

RL: BIOL (Biological study)

(shampoos containing silicones and, with good conditioning effect)

IT Siloxanes and Silicones, biological studies

RL: BIOL (Biological study)

(di-Me, shampoos containing quaternary ammonium salts and, with good conditioning effect)

IT Siloxanes and Silicones, biological studies

RL: BIOL (Biological study)

(polyether-, shampoos containing quaternary ammonium salts and, KF 352A, with good conditioning effect)

IT 143711-48-2, SM 8702C

RL: BIOL (Biological study)

(shampoos containing quaternary ammonium salts and, with good conditioning effect)

L80 ANSWER 20 OF 23 HCAPLUS COPYRIGHT 2009 ACS on STN

AN 1993:240468 HCAPLUS Full-text

DN 118:240468

OREF 118:41533a,41536a

TI Hair rinse compositions containing quaternary ammonium salts, silicones, and polyether-modified silicones

IN Ooshima, Tatsuo

PA Kanebo Ltd., Japan

SO Jpn. Kokai Tokkyo Koho, 5 pp.

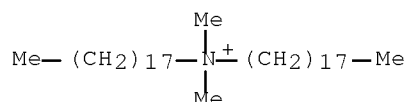
CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 1

| | PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|------|--|------|----------|-----------------|--------------|
| PI | JP 05058857 | A | 19930309 | JP 1991-244420 | 19910828 <-- |
| PRAI | JP 1991-244420 | | 19910828 | <-- | |
| OS | MARPAT 118:240468 | | | | |
| AB | Hair rinse compns. with good conditioning effect contain (i) [R1NR2R3R4]+ X- (1 or 2 of R1-R4 = C12-24 alkyl; the others = C1-3 alkyl, PhCH2; X = halo) 0.3-5, (ii) R6R52SiO[SiR52O]nSiR52R6 [R5 = Me, Ph (>90% R5 = Me); R6 = Me, OH] 0.1-2, and (iii) polyether-modified silicones 0.1-2 weight%. Octadecyltrimethylammonium chloride 1.0, di-Me siloxane 1.0, polyoxypropylene diglyceryl ether 1.5, hexadecyl alc. 2.5, liquid paraffin 0.5, glycerin monooctadecanoate 1.5, propylene glycol 5.0, and H2O to 100 weight% were mixed to give a hair rinse. | | | | |
| IC | ICM A61K0007-08 | | | | |
| CC | 62-3 (Essential Oils and Cosmetics) | | | | |
| ST | hair rinse quaternary ammonium silicone | | | | |
| IT | Quaternary ammonium compounds, biological studies | | | | |
| | Siloxanes and Silicones, biological studies | | | | |
| | RL: BIOL (Biological study) | | | | |
| | (hair rinses containing) | | | | |
| IT | Siloxanes and Silicones, biological studies | | | | |
| | RL: BIOL (Biological study) | | | | |
| | (polyether-, hair rinses containing) | | | | |
| IT | Hair preparations | | | | |
| | (rinses, containing quaternary ammonium salts and silicones and polyether-modified silicones, with good conditioning effect) | | | | |
| IT | 107-64-2, Dimethyldioctadecylammonium chloride | | | | |
| | 112-03-8, Octadecyltrimethylammonium chloride 17301-53-0 | | | | |
| | , Docosyltrimethylammonium chloride | | | | |
| | RL: BIOL (Biological study) | | | | |
| | (hair rinses containing) | | | | |
| IT | 107-64-2, Dimethyldioctadecylammonium chloride | | | | |
| | 112-03-8, Octadecyltrimethylammonium chloride 17301-53-0 | | | | |
| | , Docosyltrimethylammonium chloride | | | | |
| | RL: BIOL (Biological study) | | | | |
| | (hair rinses containing) | | | | |
| RN | 107-64-2 HCAPLUS | | | | |
| CN | 1-Octadecanaminium, N,N-dimethyl-N-octadecyl-, chloride (1:1) (CA INDEX NAME) | | | | |



● C1-

RN 112-03-8 HCAPLUS
 CN 1-Octadecanaminium, N,N,N-trimethyl-, chloride (1:1) (CA INDEX NAME)

Me₃⁺N—(CH₂)₁₇—Me

● Cl⁻

RN 17301-53-0 HCAPLUS
CN 1-Docosanaminium, N,N,N-trimethyl-, chloride (1:1) (CA INDEX NAME)

Me₃⁺N—(CH₂)₂₁—Me

● Cl⁻

L80 ANSWER 21 OF 23 HCAPLUS COPYRIGHT 2009 ACS on STN

AN 1991:478988 HCAPLUS Full-text

DN 115:78988

OREF 115:13479a,13482a

TI Germicidal elastomers

IN Fellman, Jack H.

PA Epitope, Inc., USA

SO PCT Int. Appl., 13 pp.

CODEN: PIXXD2

DT Patent

LA English

FAN.CNT 2

| | PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|------|--|------|----------|-----------------|--------------|
| PI | WO 9009013 | A2 | 19900809 | WO 1990-US377 | 19900125 <-- |
| | WO 9009013 | A3 | 19910418 | | |
| | W: AU, BB, BG, BR, CA, FI, HU, JP, KP, KR, LK, MC, MG, MW, NO, RO, SD, SU | | | | |
| | RW: AT, BE, BF, BJ, CF, CG, CH, CM, DE, DK, ES, FR, GA, GB, IT, LU, ML, MR, NL, SE, SN, TD, TG | | | | |
| | US 5326841 | A | 19940705 | US 1989-370683 | 19890623 <-- |
| | AU 9051565 | A | 19900824 | AU 1990-51565 | 19900125 <-- |
| PRAI | US 1989-301099 | A | 19890125 | <-- | |
| | US 1989-370683 | A | 19890623 | <-- | |
| | WO 1990-US377 | A | 19900125 | <-- | |

ASSIGNMENT HISTORY FOR US PATENT AVAILABLE IN LSUS DISPLAY FORMAT

AB Disclosed is an elastomeric article comprising the crosslinked polymerized product of (a) a quaternary ammonium compound N⁺R₄X⁻ (≥1 R = unsatd. alkyl, remainder are alkyl or aryl; X = halo, small anion) with (b) a free radical copolymerizable compound. The elastomers can be used to manufacture germicidal barriers. Thus, a condom was formed from polyisoprene and N,N,N-trimethyl-N-oleylammonium iodide, which was then dipped into I₂ solution to form germicidal complexes.

IC G08F0226-00; C08G0063-68; C08G0069-26; A61L0029-00; A61K0031-785

ICS @@@@-@@@; C08G0063-68; C08G0077-54; A61L0031-00; A61K0031-785

CC 63-8 (Pharmaceuticals)

Section cross-reference(s): 37, 38

IT Contraceptives

(condoms, germicidal, iodine complexes with quaternary

ammonium group-containing polymers for)

IT Siloxanes and Silicones, compounds
 RL: BIOL (Biological study)
 (di-Me, **reaction products**, with unsatd. quaternary
 ammonium halides, for manufacture of germicidal medical goods)

IT Medical goods
 (face masks, germicidal, iodine complexes with quaternary
 ammonium group-containing polymers for)

IT Polyethers, biological studies
 RL: BIOL (Biological study)
 (quaternary ammonium group-containing, germicidal
 medical goods manufacture with)

IT Rubber, natural, compounds
 RL: BIOL (Biological study)
 (reaction products, with unsatd. quaternary ammonium
 halides, as germicidal elastomers)

IT Quaternary ammonium compounds, polymers
 RL: BIOL (Biological study)
 (unsatd., polymers, germicidal medical goods manufacture with)

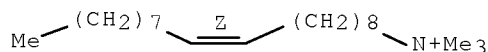
IT 36496-07-8DP, polymers with siloxanes, iodine complexes
 117488-76-3DP, polymers with natural rubber, iodine complexes
 RL: PREP (Preparation)
 (preparation of, for condom)

IT 117488-76-3DP, polymers with natural rubber, iodine complexes
 RL: PREP (Preparation)
 (preparation of, for condom)

RN 117488-76-3 HCAPLUS

CN 9-Octadecen-1-aminium, N,N,N-trimethyl-, iodide, (9Z)- (9CI) (CA INDEX
 NAME)

Double bond geometry as shown.



L80 ANSWER 22 OF 23 HCAPLUS COPYRIGHT 2009 ACS on STN

AN 1991:45553 HCAPLUS Full-text

DN 114:45553

OREF 114:7897a,7900a

TI Concentrated fabric softeners

IN Yamamura, Masaaki; Inokoshi, Junichi; Onishi, Motoko

PA Kao Corp., Japan

SO Jpn. Kokai Tokkyo Koho, 6 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 1

| | PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|------|--------------|------|----------|-----------------|--------------|
| | ----- | ---- | ----- | ----- | ----- |
| PI | JP 02191774 | A | 19900727 | JP 1989-6275 | 19890113 <-- |
| PRAI | JP 1989-6275 | | 19890113 | <-- | |

AB The title softeners comprise quaternary ammonium salts and silicone derivs-(I)
 containing ≥50% polyoxyethylene groups and having mol. weight (Mw) 5000-

2,000,000, and have good storage stability. Thus, a fabric softener composition containing 15% bis(hydrogenated tallow-alkyl)dimethylammonium chloride and 1% I (containing 70% polyoxyethylene groups; Mw 101 + 104) exhibited viscosity 182, 180, and 185 cP after storage for 20 days at -10°, room temperature, and 50°, resp.

- IC ICM D06M0015-647
ICS D06M0013-46
- CC 46-5 (Surface Active Agents and Detergents)
- ST quaternary ammonium compd fabric softener; silicone
contg fabric softener; storage stability fabric softener
- IT Quaternary ammonium compounds, uses and miscellaneous
RL: USES (Uses)
(fabric softeners, containing polyether-modified
siloxanes, concentrated, with good storage stability)
- IT Softening agents
(for fabrics, concentrated, quaternary ammonium compds.
containing polyether-modified siloxanes as)
- IT Quaternary ammonium compounds, uses and miscellaneous
RL: USES (Uses)
(bis(hydrogenated tallow alkyl)dimethyl, chlorides, fabric softeners,
containing polyether-modified siloxanes, concentrated, with
good storage stability)
- IT Siloxanes and Silicones, uses and miscellaneous
RL: USES (Uses)
(polyether-, fabric softeners, containing quaternary
ammonium compds., concentrated, with good storage stability)
- IT Polyethers, uses and miscellaneous
RL: USES (Uses)
(siloxane-, fabric softeners, containing quaternary
ammonium compds., concentrated, with good storage stability)
- IT 25322-68-3D, ethers with siloxanes
RL: USES (Uses)
(fabric softeners, containing quaternary ammonium
compds., concentrated, with good storage stability)
- OSC.G 1 THERE ARE 1 CAPLUS RECORDS THAT CITE THIS RECORD (1 CITINGS)

L80 ANSWER 23 OF 23 HCAPLUS COPYRIGHT 2009 ACS on STN

AN 1990:62341 HCAPLUS Full-text

DN 112:62341

OREF 112:10575a,10578a

TI Organo modified polydimethylsiloxanes in hair preparations

AU Sacklowski, Helga

CS Th. Goldschmidt A.-G., Fed. Rep. Ger.

SO Seifen, Oele, Fette, Wachse (1989), 115(17), 607-12

CODEN: SOFWAF; ISSN: 0173-5500

DT Journal

LA German

AB The adsorption of modified polydimethylsiloxanes from formulated conditioners and conditioning shampoos by human hair was studied by Fourier-transform IR spectroscopy and an acid-dye technique (photometry). Compds. investigated were a silicon polyether (Abil B 88183, I), a silicone betaine (Abil B 9950, II), and silicone-quaternary ammonium polymers (Abil-Quat 3270 and 3272, III and IV, resp.). Good substantivity properties were observed for II, III, and IV, but I, lacking in quaternary ammonium function, was only loosely bound. Pos. influences on combining properties were observed for III and IV in friction measurements in a wool model; IV was superior due to its longer polydimethylsiloxane chains compared to III. Typical product formulations are also given.

CC 62-3 (Essential Oils and Cosmetics)

ST polydimethylsiloxane adsorption hair shampoo

conditioner; siloxane adsorption hair shampoo
conditioner

- IT Quaternary ammonium compounds, biological studies
RL: BIOL (Biological study)
(di-Me siloxanes containing, adsorption of, by human hair,
structure and shampoo and conditioner formulations in
relation to)
- IT Adsorption
(of polydimethylsiloxanes, on human hair, quaternary
ammonium function in, shampoo and conditioner
formulations in relation to)
- IT Hair preparations
(conditioners, dimethylsiloxanes for, substantivity of,
quaternary ammonium function in)
- IT Shampoos
(conditioning, dimethylsiloxanes for, substantivity of,
quaternary ammonium function in)
- IT Siloxanes and Silicones, biological studies
RL: PEP (Physical, engineering or chemical process); PROC (Process)
(di-Me, adsorption of, by human hair, structure and shampoo
and conditioner formulations in relation to)
- IT Siloxanes and Silicones
RL: PEP (Physical, engineering or chemical process); PROC (Process)
(di-Me, 3-[3-[(3-coco amidopropyl)dimethylammonio]-2-
hydroxypropoxy]propyl group-terminated, acetates (salts), Abil-Quat
3270, adsorption of, by human hair, structure and shampoo and
conditioner formulations in relation to)
- IT Siloxanes and Silicones
RL: PEP (Physical, engineering or chemical process); PROC (Process)
(di-Me, 3-[3-[(3-coco amidopropyl)dimethylammonio]-2-
hydroxypropoxy]propyl group-terminated, acetates (salts), Abil-Quat
3272, adsorption of, by human hair, structure and shampoo and
conditioner formulations in relation to)
- IT Siloxanes and Silicones, biological studies
RL: PEP (Physical, engineering or chemical process); PROC (Process)
(polyether-, adsorption of, by human hair, structure and
shampoo and conditioner formulations in relation to)
- IT Hair preparations
(rinses, dimethylsiloxanes for, substantivity of,
quaternary ammonium function in)
- IT Polyethers, biological studies
RL: PEP (Physical, engineering or chemical process); PROC (Process)
(siloxane-, adsorption of, by human hair, structure and
shampoo and conditioner formulations in relation to)
- IT 102523-96-6, Abil B 9950
RL: PEP (Physical, engineering or chemical process); PROC (Process)
(adsorption of, by human hair, structure and shampoo and
conditioner formulations in relation to)
- OSC.G 1 THERE ARE 1 CAPLUS RECORDS THAT CITE THIS RECORD (1 CITINGS)

=> => d bib abs hitind hitstr

L83 ANSWER 1 OF 1 HCAPLUS COPYRIGHT 2009 ACS on STN

AN 2004:1019949 HCAPLUS Full-text

DN 142:7376

TI Polyorganosiloxane compositions for the treatment of substrates

IN Wagner, Roland; Roos, Christopher; Kropfgans,
Martin; Schnering, Albert

PA GE Bayer Silicones GmbH & Co. KG, Germany

SO PCT Int. Appl., 111 pp.
 CODEN: PIXXD2
 DT Patent
 LA German
 FAN.CNT 1

| | PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|------|--|------|----------|------------------|--------------|
| PI | WO 2004101684 | A1 | 20041125 | WO 2004-EP50797 | 20040513 <-- |
| | W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG | | | | |
| | CA 2540317 | A1 | 20041125 | CA 2004-2540317 | 20040513 <-- |
| | EP 1625180 | A1 | 20060215 | EP 2004-741569 | 20040513 <-- |
| | EP 1625180 | B1 | 20060920 | | |
| | R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, FI, RO, CY, TR, BG, CZ, EE, HU, PL, SK | | | | |
| | BR 2004010310 | A | 20060523 | BR 2004-10310 | 20040513 <-- |
| | CN 1823135 | A | 20060823 | CN 2004-80020420 | 20040513 <-- |
| | CN 100384940 | C | 20080430 | | |
| | AT 340224 | T | 20061015 | AT 2004-741569 | 20040513 <-- |
| | JP 2007504344 | T | 20070301 | JP 2006-530191 | 20040513 <-- |
| | US 20060237155 | A1 | 20061026 | US 2005-556124 | 20051109 <-- |
| | MX 2005012221 | A | 20060210 | MX 2005-12221 | 20051111 <-- |
| PRAI | DE 2003-10321558 | A | 20030514 | <-- | |
| | WO 2004-EP50797 | W | 20040513 | <-- | |

ASSIGNMENT HISTORY FOR US PATENT AVAILABLE IN LSUS DISPLAY FORMAT
 GI

* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT *

AB Softeners for treatment paper and paper products, synthetic or natural fibers or/and textiles with partial hydrophilizing consist of 0.05 - 90% of structurally different amino polysiloxanes or/and quaternary ammonium polysiloxanes (such as I and II), 0 - 30% of silicon-free surfactants (usually non-polymerizable quaternary ammonium compds. or nonionic emulsifiers) , 0 - 0.5% of biocides, 0 - 10% of flowing agent, 0 - 5% of usual additives and auxiliaries and 0 - 99.95% of a support material (usually water or water-soluble solvents). A typical softener prepared by emulsifying a mixture containing 40% of a mixture of I and II (in ratio 3:1) and 23.7% of a nonionic surfactant (Renex 36) in water and mixing with an aqueous solution of acetic acid and sodium acetate was sprayed onto a paper surface and provided paper with softness and hydrophilic properties.

IC ICM C08L0083-04
 ICS C08G0077-54

CC 37-6 (Plastics Manufacture and Processing)

ST softener paper synthetic natural fiber hydrophilizing agent; amino polysiloxane quaternary ammonium polysiloxane paper fiber softener; silicon free surfactant paper fiber softener

- IT Alcohols, uses
 RL: MOA (Modifier or additive use); TEM (Technical or engineered material use); USES (Uses)
 (C11-14, ethoxylated, Renex 36, Renex 30, nonionic surfactant; softeners for treatment paper and paper products from structurally different amino polysiloxanes or/and quaternary ammonium polysiloxanes and silicon-free surfactants)
- IT Polysiloxanes, preparation
 RL: IMF (Industrial manufacture); POF (Polymer in formulation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
 (polyamine-polyether-, ionomers; softeners for treatment paper and paper products from structurally different amino polysiloxanes or/and quaternary ammonium polysiloxanes and silicon-free surfactants)
- IT Ionomers
 RL: IMF (Industrial manufacture); POF (Polymer in formulation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
 (polyamine-polyether-polysiloxanes; softeners for treatment paper and paper products from structurally different amino polysiloxanes or/and quaternary ammonium polysiloxanes and silicon-free surfactants)
- IT Polyethers, preparation
 RL: IMF (Industrial manufacture); POF (Polymer in formulation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
 (polyamine-polysiloxane-, ionomers; softeners for treatment paper and paper products from structurally different amino polysiloxanes or/and quaternary ammonium polysiloxanes and silicon-free surfactants)
- IT Polyamines
 RL: IMF (Industrial manufacture); POF (Polymer in formulation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
 (polyether-polysiloxane-, ionomers; softeners for treatment paper and paper products from structurally different amino polysiloxanes or/and quaternary ammonium polysiloxanes and silicon-free surfactants)
- IT Biocides
 Paper
 Plasticizers
 (softeners for treatment paper and paper products from structurally different amino polysiloxanes or/and quaternary ammonium polysiloxanes and silicon-free surfactants)
- IT Polysiloxanes, preparation
 Quaternary ammonium compounds, preparation
 RL: IMF (Industrial manufacture); POF (Polymer in formulation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
 (softeners for treatment paper and paper products from structurally different amino polysiloxanes or/and quaternary ammonium polysiloxanes and silicon-free surfactants)
- IT 297143-62-SDP, methyl- trimethylsiloxy-terminated 798569-79-6P
 RL: IMF (Industrial manufacture); POF (Polymer in formulation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
 (**actual and assumed monomers**; softeners for treatment paper and paper products from structurally different amino polysiloxanes or/and quaternary ammonium polysiloxanes and silicon-free surfactants)
- IT 106-78-5P
 RL: IMF (Industrial manufacture); RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent)
 (polysiloxanes precursor; softeners for treatment paper and

paper products from structurally different amino polysiloxanes
or/and quaternary ammonium polysiloxanes
and silicon-free surfactants)

IT 107-51-7DP, Dimethylbis(trimethylsiloxy)silane,
reaction products with aminopolysiloxanes 609340-85-4P
740815-32-1P 798569-77-4P

RL: IMF (Industrial manufacture); POF (Polymer in formulation); TEM
(Technical or engineered material use); PREP (Preparation); USES (Uses)
(softeners for treatment paper and paper products from structurally
different amino polysiloxanes or/and quaternary
ammonium polysiloxanes and silicon-free surfactants)

IT 79-04-9, Chloroacetic acid chloride 111-46-6,
Diethylene glycol, reactions

RL: RCT (Reactant); RACT (Reactant or reagent)
(softeners for treatment paper and paper products from structurally
different amino polysiloxanes or/and quaternary
ammonium polysiloxanes and silicon-free surfactants)

IT 297143-62-5DP, methyl- trimethylsiloxy-terminated
798569-79-6P

RL: IMF (Industrial manufacture); POF (Polymer in formulation); TEM
(Technical or engineered material use); PREP (Preparation); USES (Uses)
(**actual and assumed monomers**; softeners for treatment paper and paper
products from structurally different amino polysiloxanes
or/and quaternary ammonium polysiloxanes
and silicon-free surfactants)

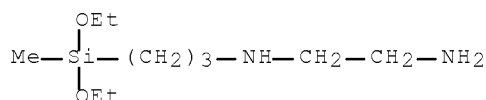
RN 297143-62-5 HCAPLUS

CN Silanediol, dimethyl-, polymer with
N-[3-(diethoxymethylsilyl)propyl]-1,2-ethanediamine (9CI) (CA INDEX NAME)

CM 1

CRN 70240-34-5

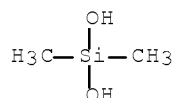
CMF C10 H26 N2 O2 Si



CM 2

CRN 1066-42-8

CMF C2 H8 O2 Si



RN 798569-79-6 HCAPLUS

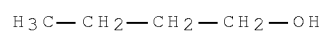
CN Silanediol, dimethyl-, polymer with
N-[3-(diethoxymethylsilyl)propyl]-1,2-ethanediamine, methyloxirane,

methylsilanediol and oxirane, butyl ether, graft (9CI) (CA INDEX NAME)

CM 1

CRN 71-36-3

CMF C4 H10 O



CM 2

CRN 798569-78-5

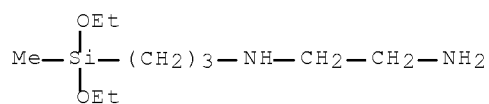
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CCI PMS

CM 3

CRN 70240-34-5

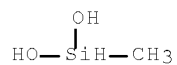
CMF C10 H26 N2 O2 Si



CM 4

CRN 43641-90-3

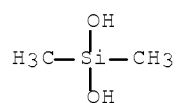
CMF C H6 O2 Si



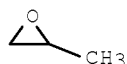
CM 5

CRN 1066-42-8

CMF C2 H8 O2 Si



CRN 75-56-9
CMF C3 H6 O



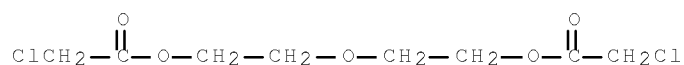
CRN 75-21-8
CMF C2 H4 O



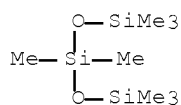
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IT 106-78-5P
RL: IMF (Industrial manufacture); RCT (Reactant); PREP (Preparation); FACT
    {Reactant or reagent)
        (polysiloxanes precursor; softeners for treatment paper and
        paper products from structurally different amino polysiloxanes
        or/and quaternary ammonium polysiloxanes
        and silicon-free surfactants)
RN 106-78-5 HCAPLUS
CN Acetic acid, 2-chloro-, 1,1'-(oxydi-2,1-ethanediyl) ester (CA INDEX NAME)

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IT 107-51-7DP, Dimethylbis(trimethylsiloxy)silane,
reaction products with aminopolysiloxanes 609340-85-4P
 740815-32-1P 798569-77-4P
 RL: IMF (Industrial manufacture); POF (Polymer in formulation); TEM
 (Technical or engineered material use); PREP (Preparation); USES (Uses)
 (softeners for treatment paper and paper products from structurally
 different amino polysiloxanes or/and quaternary
 ammonium polysiloxanes and silicon-free surfactants)
 RN 107-51-7 HCAPLUS
 CN Trisiloxane, 1,1,1,3,3,5,5,5-octamethyl- (CA INDEX NAME)



RN 609340-85-4 HCAPLUS

CN Dodecanoic acid, compd. with α -[dimethyl[3-(oxiranylmethoxy)propyl]silyl]- ω -[[dimethyl[3-(oxiranylmethoxy)propyl]silyl]oxy]poly[oxy(dimethylsilylene)] polymer with methyloxirane polymer with oxirane bis(2-aminopropyl) ether and N,N,N',N'-tetramethyl-1,6-hexanediamine acetate (9CI) (CA INDEX NAME)

CM 1

CRN 143-07-7

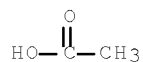
CMF C12 H24 O2



CM 2

CRN 64-19-7

CMF C2 H4 O2



CM 3

CRN 398137-95-6

CMF (C10 H24 N2 . C3 H9 N O . 1/2 (C3 H6 O . C2 H4 O)x . (C2 H6 O Si)n C16 H34 O5 Si2)x

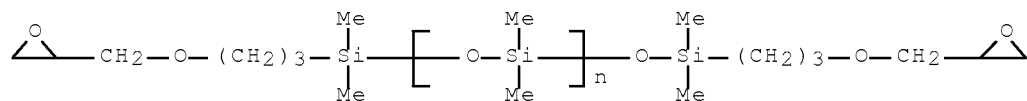
CCI PMS

CM 4

CRN 130167-23-6

CMF (C2 H6 O Si)n C16 H34 O5 Si2

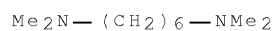
CCI PMS



CM 5

CRN 111-18-2

CMF C10 H24 N2



CM 6

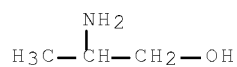
CRN 65605-36-9

CMF C3 H9 N O . 1/2 (C3 H6 O . C2 H4 O)x

CM 7

CRN 6168-72-5

CMF C3 H9 N O



CM 8

CRN 9003-11-6

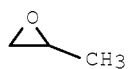
CMF (C3 H6 O . C2 H4 O)x

CCI PMS

CM 9

CRN 75-56-9

CMF C3 H6 O



CM 10

CRN 75-21-8

CMF C2 H4 O



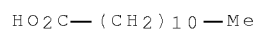
RN 740815-32-1 HCAPLUS

CN Acetic acid, chloro-, oxydi-2,1-ethanediyl ester, polymer with
 α -[dimethyl[3-(oxiranylmethoxy)propyl]silyl]- ω -[[dimethyl[3-(oxiranylmethoxy)propyl]silyl]oxy]poly[oxy(dimethylsilylene)] and
 N,N,N',N'-tetramethyl-1,6-hexanediamine, dodecanoate (salt) (9CI) (CA
 INDEX NAME)

CM 1

CRN 143-07-7

CMF C12 H24 O2



CM 2

CRN 398133-61-4

CMF (C10 H24 N2 . C8 H12 C12 O5 . (C2 H6 O Si)_n C16 H34 O5 Si2)_x

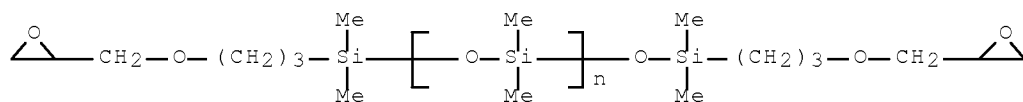
CCI PMS

CM 3

CRN 130167-23-6

CMF (C2 H6 O Si)_n C16 H34 O5 Si2

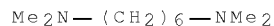
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CM 4

CRN 111-18-2

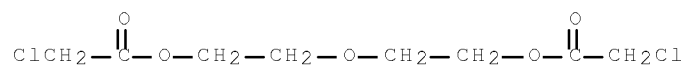
CMF C10 H24 N2



CM 5

CRN 106-78-5

CMF C8 H12 C12 O5



RN 798569-77-4 HCAPLUS

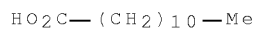
CN 1,6-Hexanediamine, N,N,N',N'-tetramethyl-, polymer with
 α -[dimethyl[3-(oxiranylmethoxy)propyl]silyl]- ω -[[dimethyl[3-(oxiranylmethoxy)propyl]silyl]oxy]poly[oxy(dimethylsilylene)],
 α -hydro- ω -(2-aminomethylethoxy)poly[oxy(methyl-1,2-

ethanediyl)] ether with 2-ethyl-2-(hydroxymethyl)-1,3-propanediol (3:1), and methyloxirane polymer with oxirane bis(2-aminopropyl) ether, acetate dodecanoate (salt) (9CI) (CA INDEX NAME)

CM 1

CRN 143-07-7

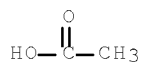
CMF C12 H24 O2



CM 2

CRN 64-19-7

CMF C2 H4 O2



CM 3

CRN 798569-76-3

CMF (C10 H24 N2 . C3 H9 N O . (C3 H6 O)_n (C3 H6 O)_n (C3 H6 O)_n C15 H35 N3 O3 . 1/2 (C3 H6 O . C2 H4 O)_x . (C2 H6 O Si)_n C16 H34 O5 Si2)_x

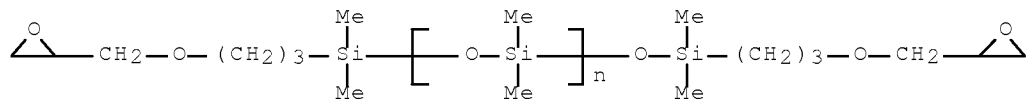
CCI PMS

CM 4

CRN 130167-23-6

CMF (C2 H6 O Si)_n C16 H34 O5 Si2

CCI PMS



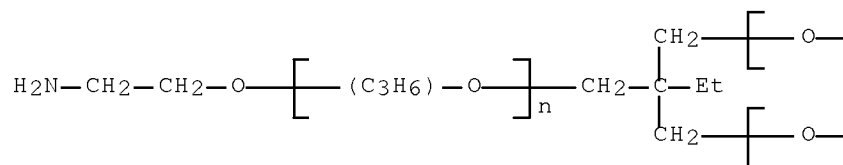
CM 5

CRN 39423-51-3

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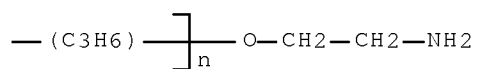
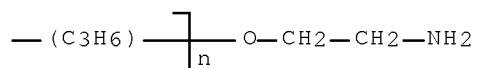
CCI IDS, PMS

PAGE 1-A



3 (D1—Me)

PAGE 1-B



CM 6

CRN 111-18-2

CMF C10 H24 N2



CM 7

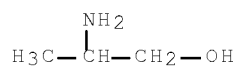
CRN 65605-36-9

CMF C3 H9 N O . 1/2 (C3 H6 O . C2 H4 O) x

CM 8

CRN 6168-72-5

CMF C3 H9 N O



CM 9

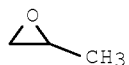
CRN 9003-11-6

CMF (C3 H6 O . C2 H4 O) x

CCI PMS

CM 10

CRN 75-56-9
CMF C3 H6 O

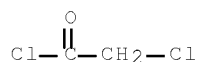


CM 11

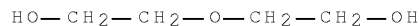
CRN 75-21-8
CMF C2 H4 O



IT 79-04-9, Chloroacetic acid chloride 111-46-6,
Diethylene glycol, reactions
RL: RCT (Reactant); RACT (Reactant or reagent)
(softeners for treatment paper and paper products from structurally
different amino polysiloxanes or/and quaternary
ammonium polysiloxanes and silicon-free surfactants)
RN 79-04-9 HCAPLUS
CN Acetyl chloride, 2-chloro- (CA INDEX NAME)



RN 111-46-6 HCAPLUS
CN Ethanol, 2,2'-oxybis- (CA INDEX NAME)



OSC.G 4 THERE ARE 4 CAPLUS RECORDS THAT CITE THIS RECORD (4 CITINGS)
RE.CNT 6 THERE ARE 6 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

=> d his

(FILE 'HOME' ENTERED AT 08:23:07 ON 08 SEP 2009)
SET COST OFF

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L2 25 S E3

L3 2091 E WAGNER R/AU
 S E3-E33
 E WAGNER ROLAND/AU
 L4 201 S E3-E5
 E ROOS/AU
 L5 10 S E3
 E ROOS C/AU
 L6 195 S E3-E12,E19,E30-E33
 E KROPFGANS/AU
 L7 26 S E8,E9
 E SCHNERING/AU
 L8 4 S E4
 E GE BAYER/CO
 L9 87 S E4-E10/CO,PA,CS
 E E10+ALL
 L10 80 S E3-E5/CO,PA,CS
 E E2+ALL
 L11 87 S (GE (L) BAYER)/CO,PA,CS
 E MOM PERF/CO
 E M PERF/CO
 E MOMENT PERF/CO
 L12 336 S E7,E9-E21/CO,PA,CS
 E E16+ALL
 L13 312 S E2+RT OR E2-E6/PA,CS
 L14 1 S L1 AND L2-L13
 L15 225 S POLYSILOXANE?/CW,CT (L) (POLYAMINE? OR QUAT? AMINE?)
 L16 313 S POLYSILOXANES+OLD/CT (L) (POLYAMINE? OR QUAT? AMINE?)
 L17 292 S POLYSILOXANES+NT/CT (L) (POLYAMINE? OR QUAT? AMINE?)
 L18 149 S C08G077-54/IC,ICM,ICS,ICA,ICI
 L19 517 S L15-L18
 L20 204 S POLYAMINE?/CW,CT (L) POLYSILOXAN?
 L21 99 S POLYAMINE?/CW,CT (L) SILOXAN?
 L22 585 S L19-L21
 L23 1960 S POLYSILOXANE?/CW,CT AND QUATERNARY AMMONIUM?/CT
 L24 2850 S POLYSILOXANES+OLD,NT/CT AND QUATERNARY AMMONIUM?/CT
 L25 314 S L22-L24 AND POLYETHER?/CW,CT
 L26 413 S L22-L24 AND POLYETHER?
 L27 13 S L22-L24 AND C08G077-46/IC,ICM,ICS
 L28 425 S L25-L27
 L29 24 S L28 AND PY<=2004 NOT P/DT
 L30 3 S L29 AND SHAMPOO
 L31 253 S L28 AND (PD<=20040513 OR PRD<=20040513 OR AD<=20040513) NOT L
 L32 177 S L31 AND (POLYIMIDE OR POLYESTER OR POLYSULFONE OR POLYUREA OR
 L33 76 S L31 NOT L32
 L34 27 S L33 NOT POLYSILOXANE?/CW,CT
 L35 2 S L34 NOT SILOXANE?/CW,CT
 L36 25 S L34 NOT L35
 L37 23 S L36 NOT PHENOL
 L38 21 S L37 NOT PHOSPHONIUM
 L39 19 S L38 NOT CARBOXYLIC?/CW,CT
 L40 16 S L39 NOT ETHOXYLATED
 L41 15 S L40 NOT ALKOXYLATED
 L42 14 S L41 NOT (PEPTIDES OR POLYPEPTIDE)
 L43 12 S L42 NOT POLYETHYLENE GLYCOL
 L44 9 S L43 NOT ME PH
 L45 8 S L44 NOT FUEL?/SC,SX
 L46 4 S L45 NOT (CONCRETE OR ZIRCONOXANE OR POLYSULFIDE OR CARBOXY)
 L47 21 S L36 NOT L46
 L48 3 S L47 AND (119:79819 OR 119:34091 OR 118:240468)/DN
 L49 49 S L33 NOT L34

L50 48 S L49 NOT SILAZANE
L51 44 S L50 NOT SILSESQUIOXANE
L52 3 S L51 AND (142:7376 OR 140:408668 OR 136:151978)/DN
L53 2880 S L1-L14
L54 24 S L53 AND L22-L24
L55 9 S L54 AND L28
L56 17 S L54 AND (PD<=20040513 OR PRD<=20040513 OR AD<=20040513)
SEL DN AN 1 3 5 7 10 11 13 14
L57 8 S L56 AND E1-E24
L58 7 S L54,L55 NOT L56
L59 19 S L1,L14,L30,L46,L48,L52,L57
L60 19 S L59 AND L1-L59
L61 19 S L60 AND (?SILOX? OR ?QUAT? ?AMMON? OR POLYETHER? OR POLYAMIN?
SEL RN

FILE 'REGISTRY' ENTERED AT 10:20:21 ON 08 SEP 2009

L62 115 S E25-E139
L63 63 S L62 AND N/ELS
L64 42 S L63 NOT SI/ELS
L65 21 S L63 NOT L64
L66 15 S L65 AND PMS/CI
L67 10 S L66 NOT C2H4O
L68 11 S L65 NOT L67
L69 12 S L62 AND SI/ELS NOT L63
L70 10 S L69 NOT (C12H27CLO4SI3 OR C8H24O4SI4)
L71 37 S L64 NOT PMS/CI
L72 31 S L71 NOT (C3H7NO2 OR C10H16N2O8 OR C7H15NO2 OR C21H44N2O OR C6

FILE 'HCAPLUS' ENTERED AT 10:28:50 ON 08 SEP 2009

L73 3 S L67 AND L61
L74 5 S L67 NOT L73
L75 5 S L74 AND (PD<=20040513 OR PRD<=20040513 OR AD<=20040513)
L76 4 S L61 AND L70 AND L72
L77 7 S L61 AND L70
L78 11 S L61 NOT L73,L75,L76,L77
L79 6 S L78 AND L72
L80 23 S L73-L79

FILE 'HCAPLUS' ENTERED AT 10:44:00 ON 08 SEP 2009

L81 1 S L1 AND L80
SEL RN

FILE 'REGISTRY' ENTERED AT 10:44:39 ON 08 SEP 2009

L82 9 S E140-E148

FILE 'HCAPLUS' ENTERED AT 10:44:46 ON 08 SEP 2009

L83 1 S L81 AND L82

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